DOCUMENT RESUME

ED 341 002 CG 023 959

AUTHOR Gopelrud, Eric N., Ed.
TITLE Preventing Adolescent Drug Use: From Theory to Practice. OSAP Prevention Monograph-8.
INSTITUTION Alcohol, Drug Abuse, and Mental Health Administration (DHHS/PHS), Rockville, MD. Office for Substance Abuse Prevention.
REPORT NO (ADM)91-1725
PUB DATE 91
NOTE 188p.
PUB TYPE Collected Works - General (020)

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS Alcohol Abuse; At Risk Persons; Drinking; Drug Abuse; Elementary School Students; Elementary Secondary Education; Identification; *Prevention; Program Development; School Role; Secondary School Students; *Substance Abuse

ABSTRACT

This monograph provides a framework for communities to build and evaluate adolescent drug abuse prevention programs. The first chapter "Adolescent Transitions and Alcohol and Other Drug Use Prevention," by Laurence Steinberg, focuses on the biological, cognitive, and psychosocial transitions of adolescence and how this knowledge can be used to intervene effectively with youth. It is concluded that, where possible, prevention efforts should be targeted to the youngest and most vulnerable. The second chapter "Identification of Youth at High Risk for Alcohol or Other Drug Problems," by Raymond P. Lorion, Danielle Bussell, and Richard Goldberg, examines methods for identifying those most at risk, and analyzes risk factors. The article cautions that identification could lead to stigmatization and self-fulfilling behavior. The third chapter "Reaching and Retaining High Risk Youth and Their Parents in Prevention Programs," by Hank Resnik and Marba Wojcicki, emphasizes new methods for reaching high-risk youth and involving them and their families in prevention programs. One such strategy is to empower communities through organization and good planning to address the problems associated with alcohol and other drug problems at the community level. The fourth chapter "Promoting Health Development Through School-Based Prevention, New Approaches," by Eric Schaps and Victor Battistich, reviews early intervention programs and discusses reaching the very young through well-planned preschool and elementary school programs. (LLL)

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OSAP Prevention Monograph-8

PREVENTING ADOLESCENT DRUG USE: FROM THEORY TO PRACTICE

Editor:

Eric N. Goplerud, Ph.D.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

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OSAP Prevention Monographs are prepared by the divisions of the Office for Substance Abuse Prevention (OSAP) and published by its Division of Communication Programs. The primary objective of this series is to facilitate the transfer of prevention and intervention technology between and among researchers, administrators, policymakers, educators, and providers in the public and private sectors. The content of state-of-the-art conferences, reviews of innovative or exemplary programming models, and reviews of evaluative studies are important elements of OSAP's information dissemination mission.

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Library of Congress Catalog Card Number: 90-061313
DHHS Publication No. (ADM)91-1725
Printed 1991
OSAP Production Officer: Timothy F. Campbell

OSAP Prevention Monograph Series

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Foreword

Prevention has come to the forefront as a major force in our Nation's fight against alcohol and other drug (AOD) problems. The Office for Substance Abuse Prevention (OSAP) was established in 1986 within the U.S. Department of Health and Human Services to assume the lead Federal role in planning, implementing, and coordinating prevention efforts at the national level.

From the beginning, OSAP faced many challenges. AOD abuse is not limited to a few individuals or a few segments of American society. Rather, it has become a problem throughout our Nation. The need to raise levels of consciousness about the problem and to develop competence in preventing alcohol and other drug problems is critical for every American town and city. OSAP could not, and indeed should not, take sole responsibility for meeting this need. Active and ongoing participation is required from parents, educators, community leaders, business owners, public and private agencies, and our young people. A truly successful effort must have partnerships, affiliations, cooperative agreements, and communitywide participation and concern.

Also critical is a cross-cultural and pluralistic perspective of the problem. As we move forward in the field, we need to use what is learned to enhance the capabilities of individuals, organizations, and communities to tailor their efforts to the diverse ethnic, racial, and cultural groups they serve. In doing so, practitioners can more realistically assess problems and needs, plan and implement culturally appropriate interventions, and evaluate results. New knowledge should be used to continually improve programmatic efforts. And we should not lose sight of the fact that our efforts will always be complicated by the fact that the behaviors and conditions we attempt to address are not static but represent dynamic, constantly changing phenomena.

OSAP provides grants to communities with program-related resources and evaluation capability to help them implement, test, and evaluate promising prevention interventions. A Learning Community was established in 1987 to promote communication and collaboration among those who carry out AOD prevention programs in different American communities. Composed of cluster groups, the Learning Community provides individuals and organizations who share certain interests and goals with a forum for collegial exchange. The groups become a vehicle through which prevention practitioners and investigators can come to know one another, exchange information, and identify areas of common concern.

Another vital component of OSAP's approach is technology transfer. This volume is an example of the rich and practical information being produced by people in the AOD prevention field. It contains useful how-to information that can be readily used by communities in planning and conducting efforts. It provides a framework upon which to build and evaluate programs.

One of the keys to good programming is to translate what is known into viable strategies that can be applied in practice. The authors of this book offer a number of recommendations for translating knowledge into action. Chapter 1 focuses on the biological, cognitive, and psychosocial transitions of adolescence and how this knowledge can be used to intervene effectively with youth. The author concludes that, where possible, prevention efforts should be targeted to the youngest and most vulnerable. Methods for identifying those most at risk and analyzing risk factors are detailed in chapter 2. The emphasis in chapter 3 is on promising new methods for reaching high-risk youth and involving them and their families in prevention programs. One such strategy is to empower communities through organization and good planning to address the problems associated with AOD problems at the community level. That reaching the very young through well-planned preschool and elementary school programs is a possibility is demonstrated through a review of early intervention programs in chapter 4.

The progress that has been made in AOD problem prevention is apparent throughout the volume and, in itself, is a tribute to all those individuals who, like our own OSAP grantees, continue to look for better approaches and to contribute their knowledge through documents such as this. OSAP wishes to express gratitude to the authors of this book in the sincere belief that others will find it, as we have, to be a valuable source of information.

Elaine M. Johnson, Ph.D., Director
Office for Substance Abuse Prevention

Contents

Foreword iii

Introduction
Eric N. Goplerud 1

1. **Adolescent Transitions and Alcohol and Other Drug Use Prevention**
Laurence Steinberg 13
Adolescent Transition: Turmoil or Transition? 14
The Adolescent Transition 16
Summary and Recommendations 41
References 44
Additional Resources and Further Reading 48
Notes 51

2. **Identification of Youth at High Risk for Alcohol or Other Drug Problems**
Raymond P. Lorion, Danielle Bussell, and Richard Goldberg . . . 53
Definitional Issues and Considerations 53
Methods for Identifying Youth At Risk 60
Factors That Place Youth at Risk 71
Summary 80
References 81
Notes 89

3. **Reaching and Retaining High Risk Youth and Their Parents in Prevention Programs**
Hank Resnik and Marba Wojcicki 91
Community Outreach Strategies 92
Outreach in Natural Settings 95
Outreach Through Programs and Institutions 96
Involving Families 98
Motivating Youth and Their Parents To Participate 100
Utilizing Role Models 101
Incentives 102
Examples of Promising Prevention Programs 103
Summary 118
References 119
Resources 120

4. **Promoting Health Development Through School-Based Prevention: New Approaches**
Eric Schaps and Victor Battistich 127
Overview and Rationale for Approach 128
Social and Behavioral Problems 129
A Brief Review of School-Based Prevention Programs 131
A Review of Selected School-Based Programs 135
Summary of Reviewed Programs 157
Toward a General Model of Primary Prevention 162
The Etiology of Problem Behaviors 165
How the Programs Compare to the Model 168
Implications of the Proposed Model 169
Conclusions and Recommendations 170
References 172
Notes 181

Introduction

Eric N. Goplerud

The alcohol and other drug (AOD) use prevention field has had a relatively brief yet controversial history. It emerged in the 1960s as fear mounted about the increased rate of illicit nonopiate drug use among young people. The widespread use of marijuana, amphetamines, barbiturates, LSD, and other hallucinogens seemed a far cry from the previous and somewhat limited concern with use of heroin and alcohol. The former was largely confined to inner-city ghetto communities; the latter was perceived as a socially acceptable, legal substance. The new array of drugs was both illicit and being used by even the most economically privileged. Prevention approaches to the new problem rested largely on moral objections to AOD use and a great reliance on fear tactics. There was little evidence then that marijuana—the most popular of the new drugs—was harmful. And there was little knowledge about effective ways of reaching and communicating prevention information to young people.

By the 1970s, fear tactics were considered ineffective and, indeed, often counterproductive (a premise that has since been found to be too simplistic; see Job 1988). Experts began to develop new prevention approaches. Among these was a cognitive orientation in which knowledge was seen as the key: teach youngsters about alcohol and other drugs and, in so doing, help them make informed decisions for themselves. This and other approaches of the 1970s were perceived as failures in the eyes of the public since young people continued in increasing numbers to use alcohol and other drugs. It was even concluded that factual information may have served to increase some adolescents' curiosity and, thus, the likelihood they would experiment with these substances.

During the 1960s and 1970s, the resources needed to move forward in the field were scarce. Research on prevention efforts was rudimentary and often post hoc. Investigators were few in number, and there was little to attract new researchers to the field. Separate bureaucratic structures were established at Federal, State, and local levels to address issues associated with alcohol use and with other, illicit drug use, despite the increasing evidence that multiple drug use patterns were becoming the norm.

The proportion of young adults (aged 18 to 25) who used marijuana daily continued to rise—from 4 percent in 1962 to 8 percent in 1980, as did the proportion who used drugs other than marijuana (from 3 percent to 33 percent in the same period) (Johnston et al. 1982). Drug patterns were constantly changing and new drugs were being produced (many synthetically) and distributed. At the same time, research was beginning to show, ever more clearly, that no one factor—pursuit of pleasure, relief from boredom or psychic distress, peer influence, family problems—was likely to be the sole reason for the widespread experimentation and sometimes continuing use of AOD among young Americans. As knowledge has accumulated, a larger number of risk factors have been added to phenomena that influence AOD use, including a possible genetic predisposition to alcohol abuse, and seemingly, cocaine abuse (Braude and Chao 1986). The multiplicity of these risk factors increases the probability of AOD use among youth (Bry et al. 1982; Dryfoos 1987; Newcomb et al. 1986)

The 1980s brought increased recognition of the complexity, interrelatedness, and multidimensional nature of problems associated with adolescent AOD use. We can no longer rely on narrowly focused, unidimensional interventions. This makes it even more important to determine the efficacy of prevention interventions—what works and for whom. Such information is critically needed, and the commitment to evaluation is greater today than ever before.

It is equally important to recognize the complexities involved in evaluation and the fact that it is a process of learning, of gaining insight, and of building—even upon past interventions that appeared to be failures. What has been learned has served as critical stepping stones to what is now being learned and what will be learned in the future pursuit of knowledge.

The dynamic nature of behavior, the individual variations in vulnerability and resiliency, the influences of the larger society and group cultures are among many of the complexities that we do not yet fully understand but that we do acknowledge and attempt to take into account as we move forward. Those who try to influence or change behaviors should certainly become aware of the organizational and social environments that might impede the adoption and diffusion of ideas and practices (Greer 1977).

The late 1970s and the 1980s have given us many advances in AOD use interventions and in our ability to evaluate them. Evaluators have shown, for example, the potential benefits of interventions designed to improve personal and social competence, including methods of:

- improving decisionmaking and problem-solving skills (Botvin et al. 1984; DiCicco et al. 1984; Hopkins et al. 1988; Schaps et al. 1986; Schlegel et al. 1984)
- enhancing self-esteem (Botvin and Eng 1980; Iverson and Roberts 1980); this has since been disputed;
- increasing interpersonal competencies (Botvin et al. 1980; Kearney and Hines 1980);
- teaching adolescents how to resist social pressures (Hurd et al. 1980; McAlister et al. 1980; Perry et al. 1980; Smith 1983);

- enhancing awareness and appropriate expression of feelings (Blizard and Teague 1981; Safford et al. 1975); and
- teaching stress management (McAlister et al. 1979).

Evans and his colleagues (1978) have been credited with pioneering interventions to counter social influences and pressures to smoke cigarettes. Others have elaborated on this approach by placing more emphasis on training youngsters to resist peer and media pressures to smoke, drink, or use other drugs (Flay and Sobel 1983; Perry et al. 1980; Telch et al. 1982).

Similar interventions based on social learning theory and cognitive behavior therapy have been applied with reported success (Pentz 1985). Youngsters are not only taught a wide range of personal and social skills to reduce potential motivation to use alcohol and other drugs but also how to apply these skills when they experience social pressure to use AOD. Recent educational strategies have been broadened to include enhancement of parenting skills among parents in general (Hawkins et al. 1987).

While many investigators and practitioners have produced research findings for dissemination to the field (and for convincing funding agencies and others that what they are doing is worthwhile and effective), much of our information about prevention programming and practices that will require research efforts to demonstrate effectiveness is developed into hypotheses by individuals who monitor, review, or visit programs and report what they observe. Reputations may develop on the basis of how well a program is organized and operated and the quality of its staff. Charismatic program directors or community leaders often influence how a program is perceived by others. A program's public image and its ability to get favorable press have a bearing on how a program is viewed.

In short, much of what we know about prevention programming is not based on scientific evidence but rather is rooted in the trial and error work experiences of practitioners that are passed down over time.

Drawing from both practitioners and prevention researchers, we can point with some confidence to 15 lessons that applied prevention practitioners should consider, and that are worth more rigorous testing in evaluation and research studies. Selection of these lessons has been guided by two considerations about *effectiveness*: first an effective prevention program is one that is feasible. That is, there must be evidence that the program demonstrating a particular lesson can be mounted and sustained in the real world. Second, there must be evidence (whether it be from rigorously controlled research, evaluation studies, or consistent case reports) that the approach reduces the incidence or prevalence of AOD use in the target group or that it influences factors associated with progression to AOD use.

1. *Know your history.* There is now plenty of information about prevention approaches that are effective and those that do not work—books such as Dryfoos' *Adolescents at Risk* (1990), Schorr's *Within Our Reach* (1988), and Melaville and Martin's *What It Takes* and recent literature review articles by Goodstadt (1990), Tobler (1986), and Moskowitz (1989). These publications provide a firm ground for building prevention programs that match the needs and strengths of young people, their families, and their communities.

2. *Know your community.* Understanding the target population and the community in which it is located is a key ingredient to program success. Conducting ongoing needs assessments builds such understanding. At a minimum, programs need to collect basic information on the community—the demographic characteristics of residents, the agencies that serve youth and their families, the social world of target groups (including culture, beliefs, and values), and problems faced by youth (especially AOD use). Three good sources for practical guidance on conducting needs assessments are *COMPASS* (United Way of America 1989), *Evaluating AOD Prevention Programs* (Linney et al. 1991), and *Making the Grade* (National Coalition for Youth 1989).

3. *Institute good program management.* Effective programming also requires sound management. Good structure includes clearly defined objectives tied to program goals, meticulous planning of program activities, rigorous training of staff in methods and content, ongoing supervision of staff, strong leadership, and clear strategies for effective networking with client and community agencies (Tobler 1986).

4. *Concentrate program resources.* The needs of target groups usually exceed the resource capabilities of prevention programs. Effective programs match effort to resource capability. They do not dilute their potential effectiveness by selecting too many sites, trying to reach too many individuals, or implementing too many activities. Schorr (1988) presents example after example of exciting programs that lost their effectiveness when they were diluted by funding cuts or stretched to serve more clients with static resources. At the same time, effective programs plan ways to extend their influence to address the complex problems and priority needs of their target population.

5. *Put first things first.* Experienced practitioners know that prevention is not likely to be the first concern of many program clients. Many will need social and emotional support, and low-income clients may need concrete help in accessing necessities (e.g., food, clothing, housing, financial assistance). Effective programs train their staff to assess and respond—

directly or through referral—to the basic and often unarticulated needs of clients (cf. Dryfoos 1990; Schorr 1988; OSAP February 4, 1991). To help address such needs, many effective programs co-locate or collaborate with other community service agencies.

6. *Plan for complexity.* The problems of high-risk youth are highly complex and interrelated. No magic bullet, no single approach, no one categorical program will be effective with all types of youngsters. Effective programs plan multifaceted approaches and, where appropriate, coordinate their work with other service agencies and grassroots groups. This theme is well demonstrated in Dryfoos' (1990) review of over 100 prevention programs in the fields of AOD use, juvenile delinquency, school failure and dropout, and teen pregnancy.

7. *Be flexible.* Effective programs do not limit their efforts to one level. They address risk factors at several levels—the individual, the family, and the community. Recent analyses of school- and community-based prevention programs (Dryfoos 1990; Tobler 1986) found that comprehensive, multicomponent interventions reduce drug use *behaviors* to a greater extent than any other single-component programs. There is increasing evidence that projects to change policies and attitudes at school, community, State, and national levels can have a sizable effect on AOD use (Moskowitz and Jones 1988; Moskowitz 1989; Pentz et al. 1989).

8. *Reduce barriers.* Effective prevention programs work to avoid and reduce the barriers so characteristic of our service system—fragmentation, inaccessibility, red tape, and so on. Some maintain continuity of service through a small, committed staff team or the assignment of an adult mentor who can guide and "parent" a young person at risk of AOD use (Dryfoos 1990; OSAP February 4, 1991; Schorr 1988).

9. *Reach out, be accessible.* People do not flock to the doors of a new program. Those at high risk and hard to reach are not easily enticed to come. Effective programs often use aggressive outreach strategies. They also attempt to locate their programs in settings that are easily accessible and culturally acceptable to target groups, such as health clinics, schools, and Boys and Girls Clubs. Programs also find it helpful to market their services appropriately, based on an understanding of the target groups, their culture, and the communities in which they live. Some have even taken the radical step of asking potential consumers what they want *before* setting up their programs (Sevick 1991).

10. *Be culturally sensitive.* To be effective, programs must be accepted. Effective programs know that what works for one group will not necessarily work for other groups. Staffs need to be especially attentive to the

ethnocultural values, beliefs, practices, and social environments of different populations (OSAP February 7, 1991).

11. *Focus on early intervention.* The evidence that intensive Head Start-type programs make a positive impact on later school adjustment, achievement, and behavior clearly points to the need to focus prevention efforts on young children. To sustain gains in high-risk groups, prevention is best initiated before the youngsters reach high school. Evidence indicates that prevention programs for young children can be generic in nature and have a number of broad goals. Programs addressing problems in later childhood, on the other hand, need a more specific focus.

12. *Use adult role models.* Many prevention programs have developed programs that compensate for the trend toward increasing numbers of children who are deprived of parental attention. Where families cannot be highly involved in their child's development, programs have used other adults to act as mentors, guides, and even surrogate parents. Adults have been hired as case managers or trained as volunteers to give children the support and one-on-one attention they need to cope with problems in their school, family, and social worlds. Dryfoos (1990) considers the availability of a caring adult in a parenting role as a hallmark of effective prevention programs, whether their target problems are AOD use, juvenile delinquency, school failure, or teen pregnancy.

13. *Involve parents.* Prevention programs are now involving parents in their efforts. However, they recognize that the optimal level of parental involvement varies by age of children, culture, and program site. For example, experience suggests that it is not generally effective to involve parents of adolescents through meetings at a central program location (OSAP February 4, 1991). Rather, it is more effective to involve parents in structured settings where adolescents congregate (e.g., Boys and Girls Clubs).

14. *Involve the school system.* Experience has shown that involving schools in prevention planning can be effective, and schools can be important resources. However, it is also true that school failures can be symptomatic of a weak school system. School reform or reorganization may be needed to address the problem of school failure or some other special needs of youngsters. There are, however, exemplary school programs in some communities with which prevention programs can ally themselves if they cannot provide services directly through the schools. For example, in some communities, alternative schools have been successful in helping high-risk youngsters stay in school. Their success has been attributed to small class size, individualized care, and committed staff.

    Schools are sometimes excellent sites for support service programs operated by community agencies; examples include school-based clinics, mental health services, afterschool programs, and parent programs. Some schools work out collaborative arrangements with community social service and health agencies to bring the ancillary services into the school to help high-risk youngsters learn social and academic skills (Dryfoos 1990; Schorr 1988).

15. *Expect differential effects.* Prevention programs find that the same intervention may have different effects on different people. Impact may differ, for example, as a function of the participants' age, gender, ethnic group membership, experience with alcohol or other drugs, school experience, and so on.

    Similarly, the impact of an intervention may vary across different outcome measures. Changes in one area (especially increases in knowledge) do not necessarily have great impact on other areas (e.g., attitudes toward drugs, intentions to use, or actual use). Tobler (1986) has shown conclusively that prevention/education programs that try to inform young people about alcohol and other drugs are able to increase their knowledge, but these programs do not change their behaviors, although increased knowledge may form the base for later changes. Similarly, programs targeting attitudes and self-esteem produce very little change in behaviors. However, a nationwide survey of high school students suggests that increased perception of the dangers of a drug may decrease its use (Johnston et al. 1982). Even on a specific outcome measure, one group may show positive change whereas another will show negative impact. Programs must build upon such findings, tailor their interventions, and continuously evaluate their impact to assure that their programs remain on track.

This book is testimony to the rich and growing body of knowledge that has resulted from the combined efforts of clinicians and researchers. The authors describe some of what has been and is being learned about the complex world of adolescents, their families, the transitions that influence their development and behavior, and the many factors that place them at risk for AOD use and for progression to addictive use. The book also contains practical information about methods of identifying, reaching, retaining, and serving youngsters and their families. A major theme throughout the book is the need to reach and intervene early with youngsters, certainly before the onset of adolescence.

The foundation of the book is the work of Laurence Steinberg (chapter 1) who reexamines the meaning of adolescence and the adolescent transition in light of recent research. Two common views no longer seem appropriate: (1) that adolescence is an inherently difficult period and (2) that AOD use results from normal problems in coping with this transition. Most adolescents manage this transitional period without serious difficulties. Our challenge is to distinguish between youngsters likely to experience difficulties during the adolescent transition and those who will not. In doing so, it will be helpful to differentiate between *risk factors* that increase vulnerability and *protective factors* that increase resistance to developing problems. In identifying such factors, one also needs to differentiate between those risk and protective factors that operate at the individual level (e.g., personality, behavioral patterns, school performance), the interpersonal level (e.g., family and peer relations), and the institutional level (e.g., school, work, and societal roles). Dr. Steinberg strongly argues for use of new knowledge, recognition that early intervention (prior to adolescence) is likely to be most effective, targeting of efforts to youngsters most at risk, tailoring of interventions to different types of youngsters, and a more systematic focusing of efforts on interpersonal and institutional factors and less exclusively on individual factors.

Raymond Lorion, Daniel Bussell, and Richard Goldberg address the issues involved in identifying high-risk youth (chapter 2). They, too, note that it is most cost-effective to target those more vulnerable and in need of AOD use prevention services. These authors translate what is currently known about identifying and assessing youth at risk into potentially viable strategies. Several methods and approaches for identifying subgroups of youth at risk are presented, including secondary analyses of existing large-scale data bases, of various kinds of record data, and of small-scale research studies; direct collection of data through ethnographic studies, key informant surveys, community forums, surveys of youth, psychometric assessments, and needs assessments; and use of composite indices to enhance reliability and predictive power of data used for making estimates of youth at risk. The identification process should aim toward ever-increasing specificity, especially if the goal is intensive treatment or rehabilitation for individual youth.

The authors provide a fairly comprehensive review of risk factors identified in the literature and note that these can serve as useful guides in developing identification strategies. They also note the importance of developing a systematic framework for identifying and selecting youth targeted for intervention, one that will specify goals, the target population, the level of AOD use involvement the intervention will be designed to address, and the substances to be targeted for intervention.

Lorion and his colleagues remind us that the estimation of the risk itself carries risks, one of which is the possibility that identification will lead to stigmatization and self-fulfilling behavior (i.e., AOD use). Programs need to take measures to guard against the possibility that participants in prevention interventions will be stigmatized by an "at risk" label.

Strategies for reaching and retaining high-risk youth—and their parents—

are presented by Hank Resnik and Marba Wojcicki (chapter 3). The authors emphasize that the individual is not likely to seek intervention until times of crisis. AOD use prevention programs cannot rely on the conventional approach of setting up shop and waiting for youth and their parents to enroll. Aggressive outreach and recruitment strategies are essential.

Programs need to define the target community, whether it be a geographical area, a racial/ethnic group, or people affiliated through common values. Several outreach models that can be used are described: outreach to high-risk youth through their natural communities, outreach through existing programs, outreach through institutional settings (e.g., correctional, treatment), and outreach through and to the parents and families of high-risk youth. Strategies employed through these different models are presented within the programmatic framework in which they have been employed, providing the reader some description of different projects.

The chapter makes a strong case for using a community-based empowerment strategy to help mobilize and build upon social networks. Outreach workers, known and trusted by the community, can be a vital key. But they must be associated with a program that has proven itself trustworthy and that provides effective incentives for youth and families to join and remain in the program.

Next, Eric Schaps and Victor Battistich (chapter 4) address one of the most critical questions facing prevention interventionists—how can one promote healthy development? The authors focus on early intervention through new approaches to school-based prevention. Entry into school, as they note, marks a major transition in the developmental path toward adulthood and autonomous functioning. And schooling itself has a pervasive influence on emotional and social development, as well as cognitive development. The school, in essence, is a major socialization influence.

Research findings from four school-based early intervention programs show that models based on a holistic developmental approach and focused on promoting positive social development (rather than simply preventing problems) can lead to healthy development for some adolescents. Based on these programs and other child development research, the authors propose a tentative model of socialization and social development that rests, in part, on the establishment of a positive affective bond between the individual child and important socializing agents and institutions. The role of these agents is to promote interpersonal relatedness, competence, and autonomy. The proposed model implies that schools should be concerned with the whole child—an undertaking that will require deep and widespread changes in the current organization, climate, and practices of most American schools. The model presented can serve as an initial framework for guiding demonstration research projects in school-based prevention.

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CHAPTER 1

Adolescent Transitions and Alcohol and Other Drug Use Prevention

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Adolescence is widely recognized as a time of transition. In every society, and within subgroups in our own society, dramatic changes occur between adolescents and their significant others and in the institutional roles the adolescents assume. To design and implement effective alcohol and other drug (AOD) prevention programs for these youth, it is imperative that we understand the nature, extent, and significance of the transition from childhood to adulthood. It is imperative, too, that we closely examine widely held beliefs about adolescence in our society. We are prone to view adolescence as a time of turmoil, and use of alcohol and other drugs as a normal manifestation of the rebellious, risk-taking phase of the teen years. Current research does not support these views.

We need to monitor, too, the changing trends in AOD use among adolescents. While AOD use among youth has decreased somewhat over this decade (Johnston et al. 1989), the popularity of crack and intravenous cocaine use is cause for alarm, given the addictive qualities of these drugs, the risk of disease from sharing contaminated needles, and the serious health consequences for infants born to cocaine-using mothers. Of special concern is the downward trend in the age of initiation into AOD use—now between the ages of 10 and 14 (Higgins 1988).

Current research indicates that adolescence is a time of transformation, not turmoil, for most people, and is stressful for only a few. Research also suggests that adolescents become involved in AOD use for a variety of reasons, only some of which may be related to a stressful transition. The challenge for AOD abuse prevention efforts is to identify the following:

- Those adolescents most at risk for AOD use
- The individual, interpersonal, and institutional transitions that heighten vulnerability and exacerbate the risk
- Those factors in our contemporary society that make adolescence a period of risk for AOD use
- The transitional periods in which adolescents are most responsive to different types of interventions

- The characteristics of adolescents in different transitional periods that make them more or less responsive to different types of interventions

These issues are examined in this chapter. The major focus is on early adolescence—ages 10 through 13—for several reasons. First, it is the period in which the dramatic changes of adolescence are most prominent. Second, there is growing evidence that AOD use prevention efforts are more effective when begun earlier (see, e.g., Pentz et al. 1989). Third, most developmental psychologists believe that young adolescents are more susceptible than older ones to such adverse consequences of AOD use as depression, school failure, delinquency, and various other forms of problem behavior and distress (Baumrind and Moselle 1985). Fourth, younger adolescents tend to be more susceptible to peer pressure than older ones (Berndt 1979; Steinberg and Silverberg 1986); junior high school students find it harder to turn away from AOD-using peers than do high school students. Finally, research suggests that early adolescence is a likely time for the establishment of AOD use patterns that may persist throughout adolescence and into adulthood. In general, the earlier youths begin AOD use, the more likely they are to develop AOD dependency and persistent AOD abuse patterns (Hawkins et al. 1985).

In the first section of this chapter, common myths about adolescence and current social science thinking that refutes these myths are summarized. Several general implications for AOD abuse prevention are drawn from the current research. In the subsequent section, adolescent changes are discussed to provide an understanding of the three transitional domains about which we currently know most:

- Individual aspects of the adolescent transition—biological, cognitive, and psychosocial
- Interpersonal aspects of the transition—relations with the family and peers
- Institutional aspects of the transition—relations with school, work, and society at large

As each of these domains is discussed, risks for AOD abuse are identified and specific implications for AOD use prevention are presented. The chapter ends with a summary of recent research findings and major recommendations for AOD use prevention.

Adolescent Transition: Turmoil or Transition?

A popular view of adolescence holds that it is a time of inherent, inevitable turmoil. Associated with this "storm and stress" image are several myths about adolescent problem behavior, including AOD use. Such myths, though widespread, are not supported by recent research. The most important of these misconceptions, from the vantage point of AOD use prevention, are the following:

- *Myth*: All adolescents experience difficulties during the transition from childhood to adulthood. Such difficulties are to be expected and are necessary parts of growing up.

- *Myth*: One of the most important and fundamental tasks of adolescence is to break away from parents and other adults. Severing these bonds is necessary to the development of emotional maturity.

- *Myth*: Problem behaviors, such as AOD use, are simply signs of adolescents' normal need to rebel against parents, teachers, and other authorities.

- *Myth*: Adolescents can be counted on to behave in strange and bizarre ways that bear no relation to their earlier patterns of behavior.

- *Myth*: Patterns of adolescent behavior have few, if any, implications for adult behavior since adolescence is, after all, just a phase characterized by normal disturbance.

Today, few social scientists support the storm-and-stress view of adolescence. Instead, most experts believe the following:

- Adolescence is a time of transformation, not upheaval. The majority of young people manage these transformations without serious difficulty.

- Adolescence is best thought of as three subperiods: early (10-13), middle (14-16), and late (17-19). The transitional periods most likely to challenge youths' adaptational capacities are those between late childhood and early adolescence (ages 10-13) and between late adolescence and early adulthood (ages 17-19).

- Various adolescent problem behaviors are highly interrelated. These include school failure, delinquent and criminal behavior, precocious sexual behavior, externalization (e.g., aggression, oppositionalism), internalization (e.g., anxiety, depression), and AOD use (see, e.g., Jessor and Jessor 1977).

- Most of these interrelated problems—including early and regular use of alcohol and other drugs—are concentrated within a relatively small and readily identifiable segment of the adolescent population. This population is disproportionately composed of (but not limited to) economically disadvantaged and minority youth in both urban and rural areas.

- Most problems experienced by young people do not result from anything inherent in adolescence but from the environmental context in which they mature.
- Use of alcohol and other drugs is *not* a normal part of growing up, nor is it likely to disappear spontaneously if left to run its course. Rather, AOD use in early adolescence is likely to reflect problems in psychosocial development, difficulties in the immediate social environment, or stresses related to the adolescent transition itself (Hawkins et al. 1985).
- Experimentation with alcohol and other drugs in late adolescence, rather than reflecting psychological or behavioral problems, may be a manifestation of the social structure that helps define adolescence in contemporary society and the liberalization of attitudes toward AOD use over the past 20 years (Higgins 1988).

Taken together, current social science findings about adolescence, and about adolescent AOD use in particular, have important implications for the design and implementation of AOD prevention programs. They are summarized here, as organizing themes, and explored in greater depth throughout this chapter.

- Because adolescence is a transitional period for all individuals, but a stressful one for only a minority, *we need to differentiate between youngsters who become involved in AOD use as a response to stress and those for whom AOD use is related to the social mores of their age group.*
- *Certain structural elements related to the transitional nature of adolescence in contemporary society may heighten youngsters' vulnerability to AOD use.* Some are related to the nature of the transition into adolescence, others to the transition out of adolescence.
- *Certain aspects of adolescence as a transitional period may make some approaches to prevention more successful than others*; they may also make some approaches more or less relevant to individuals at different points within adolescence.
- *Adolescents who evidence very similar patterns of AOD use may actually use AODs for very different reasons.*

The Adolescent Transition

The adolescent transition can best be understood as a series of integrated, yet independent, transitions that often occur during the same general time period. Because only some aspects of the transition seem related to AOD use, and because researchers have seldom isolated one transition from another,[1] transitions are discussed separately for three domains—individual, interpersonal, and institutional.

From research, we can draw some conclusions about difficult transitions and risk factors that may lead some adolescents to initiate and continue AOD use as well as prevention strategies that may be most effective. The most current research also provides a new perspective on many psychosocial themes associated with adolescence. The identity crisis, striving for autonomy, and the flight toward intimacy with the same and opposite sex peers are, in part, aspects of the adolescent transition in the three domains. The identity crisis can be seen as reactions to a changing body (individual domain) and a changing set of societal expectations (institutional and, perhaps, interpersonal). Striving for autonomy results from transformations in family relations (interpersonal) and improvements in cognitive ability (individual). Desires for intimacy are fueled by both the biological changes of puberty (individual) and the social changes of the peer group (interpersonal).

Individual Aspects

Individual transition covers biological, cognitive, and psychosocial changes.

The Biological Transition

Few changes are as important as the biological onset of puberty in defining the passage into adolescence. Scientists have long speculated about the emotional and behavioral risks—including AOD use—that might be attributable to the internal (hormonal), external (somatic), and behavioral (sexual) changes of puberty. An implicit assumption, still widely held, is that hormonal changes adversely affect emotional functioning and lead to increased rates of depression (mainly among girls), diminished impulse control (mainly among boys), and moodiness and unpredictability (among both genders). Presumably, too, the stress of adapting to puberty is one contributor to the onset of AOD use. Some adolescents might use alcohol or other drugs to combat the mood shifts from endocrinological changes or because their ability to resist temptation is undermined by hormone-related impulsivity.

Existing research provides little evidence to substantiate the notion that puberty, per se, adversely affects mental health. The one exception pertains to early maturing girls; this group does tend to show lowered self-esteem and increased depression (Petersen 1985). Whether these emotional problems lead to increased AOD use is not known. However, only a weak association has been found between puberty and AOD use, even among early maturing girls.

While the biochemical aspects of puberty do not appear to increase risk for

AOD use, it is possible that pubertal maturation—and early maturation in particular—affects adolescents' social relations in ways that increase their exposure to alcohol and other drugs. The risk, then, would be rooted in social, not biological, factors.

Three plausible mechanisms for increased AOD use among early maturers have been suggested. Each points to the indirect role of puberty as a transformer of social relations:

1. Early maturers, especially girls, are more likely to have older friends and, thus, to be exposed at an earlier age to the social activities of a "faster" crowd. These social activities may include AOD use (Magnusson et al. 1986).
2. Physically mature youngsters are more likely to bicker and squabble with their parents and to feel emotionally detached from them. Also, boys, but not girls, are given more freedom as they mature (Hill 1988; Steinberg 1987). This movement toward separation from the family, if it occurs early, may undermine parental control over the adolescent and increase the likelihood of involvement in AOD use.
3. Physical maturation is strongly associated with the onset of sexual activity, especially in boys (Smith et al. 1985). Some writers argue that precocious sexual activity is a risk factor implicated in AOD use (Jessor and Jessor 1977).

Much of the research, it must be noted, has been conducted on white middle-class adolescents. Little information is available on how the impact of maturing physically may vary across racial or socioeconomic groups. If early maturation, per se, is a risk factor, this is good news for those practitioners who work with disadvantaged youngsters, since puberty in this population typically occurs later than among more advantaged adolescents (Brooks-Gunn and Reiter in press).

In summary, the evidence for puberty as a direct cause of adolescent emotional problems or AOD use is not strong. While early maturing girls may be at greater risk than other youngsters, the significance of early maturation as a risk factor is probably minimal compared to other factors.

The Cognitive Transition

Significant changes occur in cognitive functioning during the adolescent transition—typically during early adolescence. The concrete thinking of childhood, centered mainly on the here and now, remains but expands to include the possible, the future, and the abstract. Specifically, the adolescent develops the ability to think hypothetically, to reason abstractly, and to think about the process of thinking itself (Keating in press). Adolescence heralds an important transition in reasoning ability as thinking becomes more sophisticated.

In one sense, this expansion of thinking to encompass the hypothetical appears promising for prevention practitioners. It suggests that adolescents can conceptualize the long-term consequences of unhealthy behavior and imagine themselves as adults. Thus, they should be more responsive to prevention programs that require them to take a long-term view and to advertising that promises symbolic rewards. However, advertisements for alcohol and cigarettes make use of the same symbolic capacity, associating products with sexuality, peer acceptance, status, and adult independence. And, evidence suggests, adolescents do become more responsive to messages (both anti-use and pro-use) that require a long-term view as they grow older.

Many researchers in adolescent health promotion have attempted to build upon the basic studies on adolescent intellectual development, but translating research into actual programs has proven difficult. One important obstacle stems from what psychologists refer to as "adolescent egocentrism" (Elkind 1978), which is discussed in some depth below. There are at least two other important factors:

1. It is difficult to target a particular age as *the* age for initiating programs that will take advantage of the adolescent's advanced reasoning ability.
2. Thinking abilities among adolescents of the same age vary greatly. In any group, the practitioner is likely to deal with some adolescents who are capable of hypothetical thinking, some who are on the verge of developing such ability, and some who still think like children.

Nevertheless, it seems safe to say that any prevention program aimed at adolescents more than 13 years of age should include at least some components that use these more sophisticated reasoning abilities. These components could include exercises in imagining the likely short- and long-term consequences of their actions, role-playing different hypothetical situations and how they would handle them, and considering a range of possible alternatives for avoiding AOD use. Programs designed for preadolescents under age 11 should probably be primarily concrete in nature.

The adolescent egocentrism referred to above has profound implications for understanding and preventing AOD use. Two components of adolescent egocentrism are especially noteworthy—personal fable and imaginary audience. The first is the most important for preventing AOD use.

Personal fable revolves around adolescents' erroneous belief that their experiences and future life path are unique and that, in a sense, they are invulnerable. This thinking explains why an adolescent girl can fully understand what causes pregnancy and how to prevent it and yet engage in unprotected intercourse, why a teenage boy who knows about the addictive properties of crack will still try the drug, and why another teen can cite statistics about fatal alcohol-related automobile crashes and still drive after she drinks. The first believes she will *not* get pregnant, the second that he can resist the power of crack, and the third that she can manage an automobile while inebriated. The personal fable, as recent research indicates, is stronger in early adolescence—a finding consistent with the general notion that adolescents become less egocentric as they become older (Gray and Hudson 1984).

The personal fable explains why adolescents behave in ways that violate what they know to be true or correct. And it explains why prevention programs that are primarily based on information or fear are unlikely to affect adolescent behavior. While posttests may show that the message increases knowledge or temporarily heightens fears, the personal fable permits adolescents to distance themselves from facts or what they have been told to fear. It maintains their belief in their unique abilities and powers.

Program developers need to be aware that simply varying the way information is presented to early adolescents is not likely to effect significant behavioral change or prevent problem behavior. Whether one presents the information in film, video, or printed form or uses scare tactics, there is likely to be a substantial gap between the informational component of the message and the behavior it is intended to prevent or change.

A more promising approach for the early adolescent may be the skills training being used in the newer generation of prevention programs. Skills training may prove more effective than informational conveyance or fear arousal since such training is less likely to be compromised by the personal fable.

The *imaginary audience*, the second component of adolescent egocentrism, is a kind of heightened self-consciousness (Elkind 1978). Adolescents—especially during early adolescence—tend to imagine that others are as concerned about trivial variations in their behavior as they are. This thinking explains, for example, an adolescent's concern that everyone at the rock concert will notice what she is wearing. In its more mundane manifestations, the imaginary audience is little more than an irritant to adults who cannot quite fathom the depths of adolescent narcissism.

The imaginary audience has serious implications for understanding adolescent AOD use because it suggests at least one reason for teenagers' susceptibility to peer influence. While all adolescents may worry about how their friends and classmates view them and may make some attempts to gain peer acceptance, these behaviors are accentuated by the imaginary audience. Adolescents may overestimate the degree to which their behavior—including AOD use—will engender social acceptance or social rejection. In a social situation with an opportunity to use alcohol, the adolescent may imagine the pressures to be greater than they actually are, exaggerating the positive aspects of trying it and the adverse consequences of refusing to do so.

The imaginary audience, like the personal fable, appears to be a developmental phenomenon that emerges early in adolescence and recedes with age and experience. While practitioners cannot thwart the development of the imaginary audience, they can minimize its consequences by showing adolescents that their friends care less about their behavior and have different expectations than they imagine. One way to combat the imaginary audience belief is to hold group discussions that reveal to adolescents just how imaginary their beliefs are. Adolescents may begin to shed some of their egocentric beliefs as they hear other teenagers say that they, too, worry about what their friends think, or that they do not place much emphasis on their friends' AOD use.

We know that adolescents are not likely to reject or accept one another solely on the basis of AOD use. They need to hear this from their peers—they will not believe it from adults. Groups provide a convenient vehicle for adolescents to learn from one another that what they imagine is not always true. This perspective on adolescent thinking also argues against using a purely informational approach in prevention programs. The information may register at the cognitive level but have little impact on behavior.

The Psychosocial Transition

The psychosocial transition of adolescence is most often portrayed through the popular media as an "identity crises"—a time of unpredictability, lability, and volatility while adolescents search for identity through experimentation with a variety of roles and behaviors. In this stereotypic myth, adolescents also attempt to attain autonomy through rebellion. Through this striving for autonomy, they become risk takers who are willing to try anything—even dangerous things—just for the thrill of it. They are unable to judge either the immediate or long-term consequences of their actions. In a search for intimacy, they escape into any relationship, become enraptured overnight, and forsake parents and other important adults. They become passive recipients of peer influence, beings who go along unquestioningly with any urgings of their friends.

Social scientists no longer view adolescence as a period of turmoil but, rather, as a time of transformation that presents difficulties for only a minority of teenagers. Leading researchers, commissioned by the Carnegie Council on Adolescent Development, recently reviewed the best evidence to date on identity, emotional development, family relations, peer relations, sexuality, and other issues. In their conclusions, these researchers called for a "dedramatization" of adolescence in our society (Feldman and Elliott in press). Significant transitions do indeed take place in identity, emotional development, autonomy, and intimacy during adolescence. However, the Carnegie research group concluded from the evidence that transitions are gradual and only problematic for a few. If an identity crisis occurs, it is more likely to take place in early adulthood as individuals grapple with decisions about occupational and familial commitments. A few teenagers appear to pass through an intense introspection or deliberate experimentation as part of self-examination.

Several points derived from recent research warrant attention in AOD use prevention. First, the continuities between childhood and adolescence are far more impressive than the discontinuities. Fluctuations in self-image are relatively minor. The individual who emerges from adolescence is more similar to than different from the individual who entered adolescence (Harter in press).

Second, most adolescents and their parents get along. Most enjoy close and warm ties despite—or perhaps because of—the adolescent's movement toward increased independence. In most families, parents grant the adolescent the increasing behavioral autonomy the youth seeks. This movement toward independence is seldom accompanied by emotional detachment or a severing of the emotional bond between parent and child. Nor is intergenerational conflict characteristic of most families with adolescents. Surveys consistently indicate that parents' and teenagers' values and attitudes are more alike than different (Steinberg in press).

Third, there is little support for the contention that adolescents, as a group, are innately more prone toward risk taking or less capable of making decisions than other individuals. All persons capable of logical thought (which emerges around age 5) make decisions about their behavior by evaluating the perceived costs and benefits of one choice relative to another. We do not yet know whether adolescents make such evaluations in the same way as adults (e.g., whether they place as much weight on long-term health as adults do in making decisions). We do know adolescents are often faced with choices that involve greater risk than those for other age groups and that they do not always make the choices adults would like them to make. The consequences of making bad choices can be severe (e.g., as in experimentation with crack or having unprotected sex). However, such choices are not necessarily motivated by risk-taking needs; the benefits of one choice of action (trying crack to maintain peer group status) may appear to outweigh the costs (losing friends by refusing the crack).

Finally, intimate relationships with peers and friends come to supplement, not replace, intimate relationships with parents and other adults. Peers are not the evil influence of popular thought. And adolescents are not passive recipients of their friends' influence. Like adults, teenagers select their friends partly on the basis of shared characteristics and perceived similarity. If an adolescent and his friends share certain drug patterns, it is just as likely that the friendship was formed through this shared interest as through the friends' influence on each other. Nor do adolescents make an abrupt shift from parents to friends and forsake their parents. Instead, evidence suggests that the adolescent's capacity for close relationships expands with maturity. Peers are an important part of adolescent life—a role that, in most cases, is more positive than negative (Savin-Williams and Berndt in press).

In summary, most adolescents negotiate their psychosocial transitions successfully. While there is considerable variability in the adolescent experience, most teenagers emerge with a healthy sense of self, warm relationships with their parents, a capacity to make intelligent and responsible decisions, and close relationships with one or more peers. These various aspects of healthy development are interrelated, though psychologists often separate them to study growth and development.

Problem behaviors, too, are interrelated (Jessor and Jessor 1977). For the minority of youngsters who have difficulty negotiating the psychosocial transitions, we need to look closely at the interrelatedness of their problems. For example, adolescents who have trouble determining who they are and where they are headed are also likely to have difficulties in becoming responsibly autonomous and in developing satisfying interpersonal relationships. These are youngsters, psychosocially speaking, who are at greatest risk for AOD problems. Research suggests it is easier to help the preadolescent onto a healthy path than to attempt to reorient the problem adolescent (Hawkins et al. 1985).

Given our current knowledge about normal adolescent psychosocial development, it is possible to identify several psychosocial factors that place adolescents at risk for AOD use:

- Problems in identity development, such as the development of a negative identity, one deliberately chosen to be contrary to that desired by significant adults
- Persistent underachievement
- Emotional detachment from parents, as manifested by rejection of parental values, authority, or affection
- Problems in the development of self-governance, in feelings of self-efficacy, or in decisionmaking capabilities, indicating difficulties in the development of responsible autonomy
- Persistent loneliness or rejection and isolation from peers

- Involvement in other problem behaviors, including AOD use, delinquent or criminal activity, sexual precocity, or truancy

Given these risk factors and what we know about early intervention, prevention programs should be designed to do the following:

- *Target youngsters who evidence one or more of the psychosocial risk factors, including school problems, family problems, difficulties with peers, and involvement in antisocial or deviant activities.* Since youngsters growing up in poverty are more likely to evidence signs of psychosocial disturbance (McLloyd in press), special attention should be given to these youths.
- *Facilitate healthy adolescent development rather than only deterring problem behavior.* Important program components are units on identity development, values clarification, decisionmaking skills, and social skills training (Bell and Battjes 1987). The training should focus on identity enhancement rather than facilitation of high self-esteem, since research does not support the popular notion that adolescent AOD users have low self-esteem or a poor self-image (Harter in press).
- *Target children in the middle elementary school years* (aged 9-10), before problematic patterns of psychosocial development are established and potentially intractable.

Interpersonal Aspects

Two important interpersonal aspects of the adolescent transition are covered here: the family and the peer group.

The Family

In considering the role of the family in adolescent development, the following subjects are reviewed:

1. The role and importance of the family in adolescent psychosocial development
2. Research on parenting practices and familial factors that contribute to adolescent AOD use
3. Studies on changes in family structure that affect adolescent development and may be associated with AOD use

The role of the family in psychosocial development. Society holds a deep-seated stereotypic belief that family relationships deteriorate in adolescence and that adolescent rebellion, parent-adolescent conflict, and adolescent detachment are all normal. A careful examination of the evidence on this issue is critical, because policymakers, practitioners, and parents need to know whether, and to what extent, familial stress is expected and normal. To the extent the public believes family conflict is normal during adolescence, families with AOD-using adolescents will be less likely to seek professional help. To the extent that policymakers and personnel in funding agencies subscribe to this view, they will be less likely to support programs and research designed to prevent problems erroneously believed to be inevitable or to ameliorate problems mistakenly believed to remit spontaneously after adolescence.

The stereotypic portrait of family storm and stress is unduly pessimistic. Several large-scale surveys of adolescents and parents indicate that approximately three-fourths of families enjoy warm and pleasant relations during the adolescent years (e.g., Offer 1969). Adolescents report they admire their parents, turn to them for advice and counsel, and feel loved and appreciated by them (e.g., Offer et al. 1981).

Among the one-fourth of families who report less than happy relations, the majority indicate that family problems existed prior to adolescence (Rutter et al. 1976). Only a small proportion of families—somewhere between 5 and 10 percent—experience a dramatic deterioration in the quality of the parent-child relationship during adolescence. Not surprisingly, family relations are more likely to be strained in households of delinquent, AOD using, or psychologically disturbed youth, both prior to and during adolescence. There is reason to believe, therefore, that families who experience a marked worsening of the quality of their relationships during adolescence need professional attention. Families living under conditions of poverty are more susceptible to deterioration in family relations than are other families (McLloyd in press).

While the adolescent transition is not marked by turmoil for the majority of families, many parents and teenagers find that adapting to the changes of adolescence is a challenge—especially during early adolescence. The critical period appears to be between the ages of 10 and 13. Parents must find a way to permit their teenagers to exercise greater autonomy without letting go of the reins entirely. Adolescents must find a way of asserting their individuality without severing their emotional ties to parents. And both sides must cope with the fact that the relationship necessarily changes as the child matures.

Although most teenagers do not report feeling distant from their parents, the majority indicate they feel less close than they did during childhood. Similarly, although few parents and teenagers report constant or intense fighting, the majority do state they bicker and squabble more often than before. There is no indication that these subtle changes in family relations are associated in and of themselves with increases in AOD use. Nevertheless, we should acknowledge that some families find this transition to be difficult and may react with excessive permissiveness, excessive strictness, or emotional disengagement, each of which *is* associated with AOD abuse. Thus, while storm and stress are not the norm, it is reasonable to view early adolescence as a time of potential difficulty in the parent-child relationship.

Parenting practices. The relationship between parenting practices and AOD use has been a subject of considerable investigation, and the findings are fairly consistent. A constellation of parenting characteristics is associated with lower rates of AOD use. This constellation includes warmth and affection, moderate to high levels of control marked by firm and consistently enforced rules and standards for behavior, and democratic (as opposed to autocratic) parent-child communication (Hawkins et al. 1985). This pattern has been labeled authoritative parenting (Baumrind and Moselle 1985).

The authoritative pattern has been contrasted with three other prototypic parenting patterns (see Maccoby and Martin 1983): the authoritarian or autocratic pattern, characterized by high levels of control and low levels of warmth and democratic communication; the permissive or indulgent pattern, characterized by high levels of warmth and democratic communication, but low levels of control; and the uninvolved or neglectful pattern, characterized by low levels of warmth and control. In general, AOD use is highest among adolescents growing up in uninvolved families and somewhat higher in permissive and autocratic families than in authoritative households (Steinberg in press).

The literature on psychopathology suggests that parental rejection and punitiveness are strongly related to the development of psychological and behavioral problems in children and youth. These two parenting modes are strongly associated with AOD use. In fact, one of the most consistent research findings is that AOD use rates are higher among adolescents whose parents are hostile or distant.

Parental control also appears to play a critical role in adolescent AOD use (Dornbusch et al. 1985). One might speculate that in today's society, adolescents' exposure to alcohol and other drugs is so frequent that a moderate level of parental vigilance is necessary to deter use—even among youngsters with relatively good family relations. Several parent education programs for youngsters with conduct problems (see Loeber and Stouthamer-Loeber 1985) have been designed specifically to increase parental monitoring and limit setting. They have been shown to be reasonably effective, although more research is needed.

Another consistent set of findings on family factors and adolescent AOD use concerns the influence of other family members' AOD use or attitudes on use. Not surprisingly, adolescents whose parents or siblings use or tolerate the use of alcohol and other drugs are more likely to become AOD users (Hawkins et al. 1985). It is not known whether these outcomes are attributable to direct modeling, the socialization of tolerant attitudes toward AOD use, or the correlation between parental AOD use and other parenting behaviors correlated with adolescent AOD use (e.g., drug-using parents may be more permissive in other areas of childrearing).

Changes in the American family. Much has been written about the changing demography of the family (Wetzel 1987). Briefly put, increases in rates of divorce, nonmarital childbearing, remarriage, and maternal employment have profoundly transformed the structure of American family life in the past 50 years:

- The majority of youngsters will spend some time in a single-parent household before the end of adolescence.
- About half of all children will experience parental divorce or separation.
- About one-fourth of all children will experience parental remarriage.
- About one-eighth of all children will experience multiple parental divorces.
- The vast majority of adolescents will grow up with mothers who are employed outside the home and, as a consequence, will have spent some time, in infancy or early childhood, in nonparental child care.
- A large number of children need supplementary care during the afternoon hours of their elementary or middle school years.

These changes in American family structure must be viewed against a changing economic backdrop. Today, a large and growing proportion of youngsters come of age under conditions of poverty (McLloyd in press). In its own right, poverty is only a marginal risk factor for AOD use (Murray and Perry 1985). But economic disadvantage exacerbates the adverse impact of other negative familial factors. Although children growing up in single-parent homes appear to be at greater risk for AOD use than their peers in two-parent households, the disparity between youngsters' behavior in one- and two-parent homes is likely to be greater under conditions of poverty. Similarly, studies of divorce and children's adjustment suggest that more affluent youngsters are less likely to develop long-term difficulties after divorce than are their less advantaged counterparts. In considering the impact of familial change on adolescent AOD use, we need to pay special attention to the effects these changes may have on youngsters growing up in economically depressed circumstances.

The American family is clearly in a state of transition. What one makes of these trends is less certain. The negative consequences of these changes have been overestimated in the popular press, and generalizations are difficult to make (Furstenberg in press). These cautions notwithstanding, three byproducts of these changes in the American family have important implications for AOD use prevention.

First, because of increases in divorce and remarriage, a large number of youngsters must adapt to familial change. Although the majority seem able to weather these changes without lasting deleterious consequences, a substantial minority of adolescents who experience familial disruption or reconstitution show some signs of temporary psychological difficulty that may be associated with increased rates of AOD use (Hetherington and Camara 1984). Boys experience more difficulties than girls in the case of divorce, and girls more difficulties than boys in the case of remarriage, especially during early adolescent years. Problems are more severe among children growing up under other conditions of stress, including poverty. Youngsters from stepfamilies are equally, if not more, at risk for psychological and behavioral problems as youngsters from divorced families.

Second, because of divorce, nonmarital childbearing, and maternal employment, a large number of youngsters spend a significant amount of time each day without any direct adult supervision. This has led to a large but unknown number of so-called latch-key children, who supervise themselves between the end of the school day and their parents' return from work.

The absence of adult supervision during afterschool hours has important implications for understanding the genesis of AOD use in early adolescence. First, research indicates that parental monitoring is one of the most important deterrents to adolescent problem behavior (e.g., Patterson and Stouthamer-Loeber 1985). Second, youngsters who spend much of their afterschool time unsupervised and away from their homes are the most susceptible to peer pressure to engage in antisocial activity (Steinberg 1986). A recent study of nearly 5,000 eighth grade students found those unsupervised 11 or more hours per week were twice as likely as their more supervised peers to use alcohol, cigarettes, and marijuana. This heightened risk for AOD use persisted even when the researchers controlled for factors that influence AOD use behavior, such as the amount of stress a youngster experiences at school or home. One risk factor not explored, researchers noted, was peer influence (Latchkey Kids 1989). Accordingly, the developers of prevention programs need to focus special attention on young adolescents who are not under direct adult supervision after school.

Finally, economic hardship appears to lead to increases in parenting practices that are associated with maladjustment in children, that is, hostile, punitive, and inconsistent disciplinary methods (McLloyd in press). These practices are associated with childhood psychological disturbance, aggression, and problem behavior, including AOD use.

The changing demography of family life has led to a somewhat widespread view that the family has become so weakened it no longer plays an important role in adolescents' lives. This view is clearly wrong and is refuted by countless studies on family relations and adolescent development. Despite the changes in family structure that have occurred in the past 50 years, the family continues to be the most important influence on the behavior and development of the adolescent (Hill 1980). Indeed, several writers have suggested that the quality of the adolescent's family relations is far more important to healthy development of adolescents, including minority youth, than the composition of the youth's household (Steinberg in press).

Summary. From the three aspects of family influence on adolescent development and AOD use just considered, several points are especially important:

1. The adaptational demands of adolescence—especially early adolescence—may challenge some families to change in ways that provoke adolescents to use alcohol or other drugs. However, family stress and upheaval around the adolescent transition, per se, is not the norm.
2. Adolescents who experience parental rejection and punitiveness are at especially high risk for psychological problems, behavioral problems, and AOD use. AOD use among family members is an added risk factor, as is a tolerant attitude toward AOD use.
3. The changing demography of American families may heighten adolescents' susceptibility and/or exposure to AOD use when they (a) must adapt to family dissolution or reconstitution, (b) have a minimum of adult supervision, or (c) grow up in conditions of poverty.

To the extent possible, prevention programs should target adolescents (and especially young adolescents) who experience family-related problems, such as family dissolution, reconstitution, or pervasive conflict; those who are unsupervised by adults; and those who live in impoverished economic conditions. Broad-based prevention efforts should also involve parents. The interventions should enhance parenting skills related to healthy adolescent development and assist working parents in developing effective strategies for supervision of adolescents during afterschool hours.

The Adolescent's Peer Group

Recent research is moving us away from the stereotypic view that the adolescent's social world is dominated by a monolithic peer culture that is opposed to adult standards. At times, it does seem as if adolescents have constructed their own world—an adolescent society, as one author called it some 25 years ago (Coleman 1962)—and that it functions according to different norms, standards, and values than the broader society. It is true that the peer group, with its norms and evaluative standards, takes on increased importance as youngsters move into and through adolescence. Teenagers turn increasingly to their peers for advice on matters about which their parents may be ill informed. This increased importance of peers as a source of influence is one of the most notable aspects of the transition from childhood into adolescence. But it seems accurate to say that the peer group's increased importance supplements, rather than replaces, the importance of the family (Steinberg 1989).

Rather than being monolithic, the peer culture comprises a number of smaller societies, called crowds in social science jargon. Each is quite different from the others. In typical American high schools one finds an athletic crowd (jocks), an academic crowd (brains), a social crowd (populars), and, especially important here, a drug-oriented crowd (druggies), among others (Brown in press). Some research indicates that, along with attitudes toward academics, orientation toward alcohol and other drugs is one of the most important determinants of peer crowd structure in adolescence (Berndt 1982).

Peers are important influences on AOD use (Hawkins et al. 1985; Murray and Perry 1985). Friends do have some impact on each other, and the crowd an individual associates with establishes norms and standards for behavior. Some crowds encourage AOD use, but others actively discourage AOD use and actively encourage involvement in activities more in line with adult mainstream values, hopes, and expectations. Most adolescents report that their friends are more likely to pressure them to stay in school than to drop out and to behave responsibly rather than violate the law. However, the majority of adolescents also report that they feel pressured to use alcohol and other drugs (Brown in press). This pressure is cause for concern. Thus, important questions for AOD use prevention are: Where within this range of crowds and values related to AOD use is a particular adolescent located? How and why does the youth belong there?

We sometimes oversimplify our intervention efforts by focusing on helping adolescents fight off explicit goadings of peers to use alcohol and other drugs. The pressure can also be implicit. We tend to ignore the more subtle, and perhaps insidious, ways in which the peer group encourages AOD use. To understand this more fully, we need to look closely at the meaning of and changes in peer group membership during the adolescent transition.

During early adolescence, crowds begin to play an important role in defining identity. Crowd membership becomes a badge, either involuntarily or by choice. The label of jock, whether given by self or classmates, signifies more than the adolescents' enjoyment of sports. It also means they dress, act, speak, and organize their leisure activities in ways other jocks do. Being a jock is as much a part of their identity as an occupation is to an adult. In early adolescence, in particular, before formation of a strong sense of personal identity (a development most psychologists believe occurs in late adolescence), this group identity serves as a rudimentary basis for self-definition. The rewards of fitting in, and the sanctions against deviating from crowd standards, are greater during the early adolescent years than before or after them (Brown in press).

To some extent, crowd membership indicates something about the adolescent's attitudes toward alcohol and other drugs. While all adolescents are likely to be exposed to drugs, including alcohol, those who identify themselves as members of drug-oriented crowds (druggies, partiers) are at special risk for AOD problems. While having one or more friends who uses alcohol or other drugs is a significant risk factor, membership in a crowd that uses AOD to define its identity places the individual in the compromised position of having to continue to use alcohol or other drugs to maintain both a social network and a sense of self. For these youngsters, giving up alcohol or other drugs may mean giving up a part of their identity.

In planning prevention strategies that take peer influence into consideration, early adolescence again emerges as the key transitional period upon which to focus, for at least the following reasons:

- *The potential for the development of a drug-oriented group identity emerges in early adolescence* (Brown in press). It is unlikely that drug-oriented crowds develop earlier than the junior high school period, though some youngsters may begin using AOD before that time.
- *The rewards of fitting into the crowd, and the sanctions against deviating from it, are greatest during early adolescence* (Brown in press). Pressures to conform are greater in early adolescence than any other time.
- *Young adolescents are more likely than other youngsters to give in to peer pressure.* Several studies show that susceptibility to peer pressure follows an inverted U-shaped curve, with susceptibility increasing from the third through the eighth grades and then falling during the high school years (e.g., Steinberg and Silverberg 1986).

Many of the newer, more effective prevention programs have, as one goal, enhancing adolescents' ability to withstand peer pressure to experiment with or use alcohol and other drugs. However, they do little to alter the values and norms of the broader social system in which this pressure is exerted. Programs sometimes focus on developing decisionmaking skills but more often on developing social skills—including assertiveness. This approach is based on evaluations of successful smoking prevention programs. While there is reason to be guardedly optimistic about these newer interventions, there is also reason for caution. Smoking, per se, is rarely a basis for peer group membership or social status, while AOD use continues to be (Brown in press).

Taken as a whole, the literature on adolescent peer groups has several implications for AOD abuse prevention:

1. *Successful prevention efforts should address both youngsters' ability to resist peer pressure and the nature of peer pressure by using school and communitywide interventions designed to effect attitudinal change.* Practitioners need to capitalize on the tremendous influence peers have on the behavior of adolescents in contemporary society. Greater attention needs to be devoted to combating the indirect, implicit ways in which peers and peer crowds influence AOD use behaviors.
2. *Membership in certain peer groups may be associated with additional risk for AOD use.* These peer crowds are found in most secondary schools. Youngsters who belong to druggie groups may be involved in AOD use for different reasons than other youngsters. Youths in druggie groups may use drugs, including alcohol, to enhance their identity or their friendship and social support network. Thus, they may be less responsive to social skills training than other youngsters. Practitioners need to plan for such differences. They should also be aware that peers can influence prosocial as well as antisocial behavior and should explore ways of marshalling positive peer pressure as well as defusing negative pressure.
3. *Interventions designed to enhance adolescents' ability to withstand peer influence to engage in AOD use should begin just prior to the onset of adolescence,* in the late elementary school years, when susceptibility to peer pressure is greatest. Interventions that do not begin until middle adolescence may be too late.

Transitions in Social Institutions

Those institutions most important in adolescent transitions are school, work, and social status. All of these institutional structures are important in the adolescent's development of self, social relations, and activity patterns. They may also greatly influence AOD use patterns.

School Transitions

For the majority of adolescents, schools help establish major roles in the developing sense of self. Schools are also the primary setting for the development and expression of social relations with peers. And schools provide the main basis for the organization of adolescents' daily activities. Clearly, schools exert a powerful impact on the adolescent's self-concept and sense of identity, influence the adolescent's contacts and the context of these interactions, and determine, in large measure, the behaviors adolescents have time and freedom to engage in and the settings in which behaviors are pursued. Accordingly, schools exert both direct and indirect influences on patterns of AOD use.

Important curricular and organizational changes occur in school during the adolescent transition. Virtually all individuals change schools at least once during adolescence, and most change schools more often. Even within the same school, students may face new schedules, different instructional approaches, a transformed curriculum, or a new system of classroom organization. These transitions have implications for the adolescent's developing sense of self, social network, and patterns of activity—including AOD use.

The structuring of schools for early adolescents has generated considerable debate. One concern is the number of changes this age group makes in moving in and out of separate systems (i.e., junior high or middle schools). Several seminal studies conducted during the late 1970s (see Simmons and Blyth 1987 for a summary) questioned the necessity of separate schools, which, until then, were seen as a necessary component of the preparation for further education.[2] Scientists and practitioners expressed concern that school transitions increased the degree of stress adolescents experience. This stress, especially during early adolescence, may make youth more vulnerable to a range of psychological and behavioral problems, including AOD use. At least one study suggested that early school transition put young adolescents into contact with older adolescents and exposed them to social activities, including AOD use, from which they would otherwise have been protected (Blyth et al. 1981). Some critics called for the abolition of separate schools for young adolescents and a return to a two-level system composed of elementary school (grades K–8) and high school (grades 9–12).

This perspective has since softened. We now know that school transitions are important and are not necessarily deleterious. School transitions place some adolescents, but not others, at greater risk for AOD use. What seems to be most important is the specific nature of the school change. To the extent that a school transition diminishes an adolescent's self-concept, disrupts social relations, increases exposure to peers who are involved in alcohol and other drugs, or transforms patterns of activities in ways that diminish adult supervision, risk for AOD use is increased.

For the majority of young adolescents, the transition from elementary to secondary school is from a personal, individualized, and protected environment to one that is highly impersonal, often anonymous, and less attentive to the specific needs of each student (Entwistle in press). These factors may increase the likelihood of AOD use in several ways. First, the transition into a less personal and less protected school environment has a negative impact on adolescents' self-esteem and achievement and creates feelings of anonymity (Simmons and Blyth 1987). To the extent that AOD use is a response to stress, such a school transition may be associated with increased use. There is some rather slim evidence that the earlier such a transition occurs, the more deleterious its effects because it may coincide with other adaptational challenges that tax the adolescent's psychological resources. For example, youngsters who experience puberty and a school change concomitantly may be at greater risk than their peers for whom these events do not coincide.

Second, social activities appear to trickle down from older to younger students in the same school (Blyth et al. 1981). Because adolescent AOD usage increases with age, young adolescents who attend school with older ones are more likely to be exposed at an earlier age to AOD use than are young adolescents who are segregated from older students. This is important because earlier involvement with alcohol and other drugs is likely to have more serious consequences for the individual than later involvement. Also, young adolescents who attend school with older ones are more likely to be victimized and are less likely to participate in school-based extracurricular activities that may be identity enhancing. Taken together, studies suggest that preadolescents who attend schools in districts that group them with older peers may be more at risk for AOD problems than their counterparts who are segregated from older teenagers. This is especially true for girls because they generally mature earlier than boys.

Finally, studies indicate that some adolescents are more adversely affected by school transitions than others. Specifically, adolescents who have had academic difficulties, prior psychosocial problems, or who lose a large number of friends or peer groups during a school transition are at greatest risk for adaptational difficulties (Berndt 1987; Safer 1986). This suggests that prevention programs aimed at key school transition points might be targeted, in part, toward subpopulations of youngsters with existing academic or psychosocial difficulties.

Afterschool Programs

The increasing participation of mothers in the labor force has raised new issues and concerns about the supervision of adolescents during nonschool hours. Our present-day school schedule is not well suited to the needs of most working families. While this is not the place to debate the extension of the school day or lengthening of the school calendar, it is important to note that the current schedule leaves many children without adult supervision and, thus, vulnerable to participation in antisocial activities. The problem is a significant challenge to prevention practitioners.

The latch-key problem is especially worrisome in relation to young adolescents (Steinberg 1986). This age group has been difficult to reach with afterschool programs; those that are essentially custodial are viewed by young adolescents as childish. Few middle or junior high schools provide the range of afterschool activities offered in most senior high schools; existing ones are often limited to athletic programs, which serve only a minority of youth. Also, child labor laws limit young adolescents' participation in jobs likely to be under adult control. As a result, early adolescents are less likely to be closely monitored than younger or older youth, though in some respects they are the group most in need of adult supervision.

One thrust of this chapter is that settings, like individuals, can be more or less at-risk for adolescent AOD use. Currently, one of the riskiest settings is a youngster's own home when adults are not available as monitors. A Ford Foundation study indicated, for example, that the majority of adolescent pregnancies are conceived during afterschool hours in adolescents' own homes (cited in Steinberg 1986). Similarly, most studies of early alcohol use find that adolescents' first exposure to alcohol is often in their own households.

While practitioners cannot oversee what takes place in the privacy of adolescents' homes, those involved in prevention should be concerned about an absence of large-scale afterschool programming aimed specifically at young teenagers. This programming need not directly concern AOD use prevention (although afterschool programs might well include such material) but should be designed to engage young adolescents in interesting and developmentally appropriate activities under the supervision of adults.

The Transition Into Work

Although we think of the transition into work as occurring toward the end of the adolescent decade, most youngsters enter the formal labor force while enrolled in school. News stories about youth *un*employment dominate the media but, in fact, youth employment reached an all-time high during the early 1980s and has remained at high levels since (Greenberger and Steinberg 1986). Although many disadvantaged minority youth have difficulty finding and securing employment, close to 90 percent of all high school students will have had some experience in a part-time job before completing high school (Fine and Mortimer in press). Even among minority youngsters, the proportion with experience in the labor force during the school year is far greater than the proportion without such experience. Most adolescents make the transition into the formal labor force sometime around their 15th or 16th birthday; the timing of this transition is closely regulated by State and Federal labor statutes. This transition has been shown to have important implications for AOD use.

Popular wisdom holds that working during adolescence is beneficial to young people—that it helps foster responsibility, teaches money management, and assists in the acquisition of work skills necessary for satisfying adult employment. Working is also believed to deter adolescent AOD use by helping to integrate teenagers into adult society. Ironically, the transition into the part-time labor force during the school year appears to have quite opposite effects (Greenberger and Steinberg 1986). Briefly put, AOD use appears to increase rather than decrease with work. Several studies indicate that teenagers who work, especially those who work long hours, are more likely to use tobacco, alcohol, and illicit drugs than are their counterparts who do not work or who work fewer hours (Bachman et al. 1986; Greenberger and Steinberg 1986). Although this effect is somewhat stronger among middle-class than disadvantaged youth, no studies indicate that working deters AOD use (Fine and Mortimer in press).

The literature on school transitions and adolescent AOD use illuminates this phenomenon. Several of the same mechanisms that link school transitions to AOD use also operate for part-time work. Specifically, working appears to increase AOD use through stress, increased contact between adolescents and older youth (who may expose them to alcohol and other drugs), decreased levels of adult supervision, and increased financial autonomy. A word or two is in order about each of these mechanisms.

At least one study shows that adolescents who work experience more stress on the job than had been anticipated and that stress on the job is associated with increased AOD use among teenagers, as it is among adults. Especially stressful are jobs that place adolescents under time pressure, expose them to noxious levels of heat or noise, limit them to repetitive or monotonous tasks, or place them under the direct supervision of an autocratic boss (Greenberger et al. 1981). Many of these conditions are characteristic of jobs in the food service industry, the largest employer of teenagers.

Research also indicates that few adolescents form meaningful relationships with adults as a consequence of their employment. Rather, many form friendships with slightly older peers on the job (Greenberger and Steinberg 1986). One likely byproduct of employment, therefore, is increased contact with older peers who may be AOD users.

Also, there is some evidence that employment weakens the control parents have over their children by diminishing contact between them and by increasing youngsters' financial autonomy. This, in turn, appears to increase their behavioral autonomy (Greenberger and Steinberg 1986). To the extent that having a job lessens parental monitoring, it may be associated with increased AOD use.

Finally, several large-scale surveys (e.g., Bachman et al. 1986) indicate that the bulk of students' earnings—even among economically disadvantaged students—goes toward immediate personal purchases and recreational expenditures. One explanation for the higher rates of AOD use for adolescent workers than nonworkers is the difference in discretionary income. No firm data are available, but it is likely that a significant proportion of some youngsters' earnings from part-time employment goes toward AOD consumption.

Most studies indicate that the number of hours an adolescent works each week is more important than whether the youth works. Adolescents who work for limited amounts of time are not necessarily at great risk of AOD use. Rather, working in excess of 15 hours weekly for freshman and sophomores and in excess of 20 hours weekly for juniors and seniors places youngsters at greatest risk for work-related problems, including diminished involvement with parents and schools and increased AOD use. The effects of summer employment on AOD use are not known.

Studies of the transition into part-time work among school students have several implications for AOD use prevention:

- Work programs, alone, are unlikely to deter AOD use. Excessive work in the absence of close adult supervision may increase AOD use.
- Adolescents who work more than 20 hours a week are at greater risk than others for AOD use.
- Efforts to facilitate adolescents' transition into adult work roles might be most effective if they emphasized volunteer work or service activities with minimal pay, since large amounts of discretionary income may increase the risk for AOD purchase and use.

Social Status

Transition to a new status and new definition in society represents the third set of fundamental changes that define the adolescent's shifting relationship to social institutions. These transitions affect the ways in which adolescents perceive themselves and are perceived by others as members of their communities. The concerns here are with the changing roles of individuals as they mature, the rights and obligations that accompany these changes, and the problems young people encounter as they attempt to negotiate these transitions.

Examining adolescence as a time of status change has important implications for AOD use prevention. First, as people's status changes from child toward adult, they desire, and are granted, new rights and privileges. Because our society reserves the use of certain licit drugs—most notably tobacco and alcohol—as a privilege available to adults, their use connotes maturity and status. Advertisers in the alcohol and tobacco industries capitalize on this by portraying product users as mature or sophisticated; adolescents on the verge of maturity (if not sophistication) are eager to obtain symbols of their imminent adult status. It is probably safe to assume that if we continue to portray alcohol and tobacco consumption (and, by implication, the consumption of all drugs) as indicators of adult status, young people will find these substances attractive and view them as status enhancing.

This problem of associating alcohol and other drug use with being an adult is exacerbated by our society's lack of a clear distinction between adolescents and adults in other social areas. Unlike less industrialized societies, which mark the transition to adulthood with clear rites of passage, we have only a hazy boundary between adolescence and adulthood. Thus, youngsters in our society may find they become adults at different ages, depending on the privilege or obligation in question; for example, laws that permit work at age 16, driving at age 17, voting at age 18, and alcohol use at age 21. Although the explicit message we give youth about tobacco and alcohol use is that they must wait until adulthood before experimenting with them, adolescents have legitimate reason to ask just when this status change takes place, and why it is delayed several years beyond other, presumably important, status changes.

Some commentators, drawing on historical and cross-cultural data, have remarked on the absence of satisfying roles for young people in our contemporary society. The extension of schooling and the concomitant prolongation of economic dependence on adults have left adolescents in a difficult situation. While they possess many of the psychological, biological, and social skills needed to function as full members of society, they lack access to meaningful roles and important resources (President's Science Advisory Committee 1974). Although capable of making adult contributions to society, adolescents are not encouraged to do so and, in some ways, are prohibited from doing so. As a result, some critics argue, adolescents see themselves as isolated from adult society and may be reluctant to adopt adult values and behavioral norms.

Other writers, echoing a similar theme, point to certain ironies in the changing nature of adolescent autonomy. They note that, prior to the 20th century, adolescence was a period of semiautonomy in which adolescents worked and earned money but lived under the protective cover of adults in their community (Katz 1977). Over the past 100 years, adolescents' access to legitimate adult roles has been increasingly constrained; the protection they once had has gradually eroded through changes in the structure of the family and communities. These changes have segregated young people not only from adult roles, but also from adults (Bronfenbrenner 1974). Many are on their own for hours each day without adult supervision. Paradoxically, teenagers today have more autonomy than their predecessors in terms of leisure, discretionary consumption, and grooming, but relatively less autonomy to pursue socially valued adult activities, such as full-time employment. Ironically, young people may find it easier to purchase illicit drugs than to obtain legitimate employment.

Still others have suggested that the emergence of adolescence, as we know it today, is a trivialized, if not utterly meaningless, stage of life in which the important task of preparing for adulthood is less important than entertainment, consumption, and frivolity (see Greenberger and Steinberg 1986). Rather than reward psychological and social maturity, society now rewards "pseudomaturity," a state in which adolescents are encouraged to acquire the superficial trappings of adulthood—to dress, spend, and recreate like adults—without (or before) having developed the emotional and psychological maturity associated with adulthood. Because tobacco and alcohol are two of the trappings of adulthood, the use of these substances is now part of the package of pseudomaturity. From this perspective, adolescent AOD use can best be seen as behavior that affirms, in a distinctly adolescent fashion, teenagers' desires to be adultlike, rather than behavior born from frustration or alienation from adult values. Following this line of reasoning, one might conclude that adolescents use AODs because these substances are associated with adulthood and especially because they may provide them their only available taste of adulthood.

One might speculate that if other, more legitimate, means of feeling (or being) adultlike were readily available, young people would invest their energies in these activities rather than in AOD use. Some support for this argument lies in the developmental data on AOD use. These data suggest that rates and frequency of use drop off markedly when individuals reach young adulthood and enter into meaningful work and family commitments (Yamaguchi and Kandel in press). In other words, when young people are involved in roles that demand and reward responsible adult behavior, they are likely to stop or decrease their use of alcohol and other drugs accordingly.

For minority and disadvantaged youth, the links between AOD use and status changes in adolescence are more complex. Rolelessness affects these youth more profoundly than advantaged youngsters. Poor and minority youth receive less encouragement and opportunity to remain in or pursue the few legitimate roles available to young people in our society, such as the role of student or worker. Problems in either or both of these roles decrease the likelihood that adolescents will make a successful transition to adulthood. Constant exposure to pervasive unemployment diminishes an adolescent's willingness to complete education. Failure to complete school compromises chances for entry into the labor force and meaningful employment (Youth's and America's Future 1988).

While little systematic research has been done on the relationship between the transitional problems of minority and poor youth and their high rates of AOD abuse, three basic, but somewhat different, arguments have been made in this regard:

- *Argument 1: AOD use is a response to the frustration young people feel when they believe their educational and occupational opportunities are unfairly constrained.* Pessimistic about chances for success and skeptical about societal promises of rewards for hard work, disenfranchised youth see little reason to follow the dictates and values of mainstream society (e.g., Ogbu 1974). Involvement with alcohol and other drugs may reflect their general alienation from our broader social system (e.g., Hirshi 1969). They may perceive themselves as having little at stake relative to the risk involved in AOD use (Hayes 1987).

- *Argument 2: AOD use and other risk-taking and criminal behavior is more likely to occur among young people who see themselves as having little to lose from such activities.* AOD use offers a temporary escape from impoverished surroundings and from the feelings of desperation and hopelessness engendered from growing up in poverty. AOD use, then, is related more to an insidious sense of futility than to a lack of bonding to the social system (McCord in press).

- *Argument 3: The recent involvement of minority and disadvantaged youth with drugs is an economic decision, made with some degree of rationality.* Since legitimate avenues to occupational and financial success seem closed, entrepreneurial youth turn to illicit activities for income, including buying and selling drugs (Kolata 1989). The introduction of crack in the last decade has provided many youths with an inexpensive, highly profitable product than can be sold readily to teenage customers. The availability of cocaine on the street, the ease with which crack is made from cocaine, and the high profitability of dealing crack "has greatly expanded the numbers of low level retail dealers, who do not need to be part of major importation networks" (Falco 1988, p. 9). Drug trafficking, itself, may lead to drug use.

Although these three premises differ in the reasons for involvement with alcohol and other drugs among minority and disadvantaged youth, they all express the likelihood that many of these adolescents will not experience an enviable transition into the adult stage of life.

While the institutional and social structural transitions from late adolescence into adulthood appear, at first glance, to be beyond the bailiwick of prevention practitioners, one can also argue that they are not. By continuing to view AOD problems apart from the broader context in which adolescents grow into maturity, we only hamper the effectiveness of prevention efforts. The implications of research cited here suggest three considerations for prevention programming.

1. *Programs need to take into account adolescents' place in the society in which they live and not focus solely—as most now do—on the development of individual cognitive or social skills.* Enhancing interpersonal and decisionmaking skills without addressing the problems youth have in entering the legitimate roles of adulthood is not likely to have a substantial or lasting impact on patterns of AOD use, especially among disadvantaged or minority youth. Also, programs must be tailored to the specific contextual conditions of their target populations, since the nature of the transitional problems faced by young people is profoundly influenced by their immediate environment.

2. *Direct attempts should be made to enhance youngsters' bonding to school and other community institutions (such as religious institutions).* A sense of bonding and commitment is likely to depress AOD use by helping to integrate young people into legitimate and, ultimately, status-enhancing roles. To the extent that AOD use is a byproduct of youngsters' disenfranchisement from societal roles, attempts to foster bonding to societally approved institutions and their goals and values will attenuate AOD use. Attempts should be made to increase opportunities for young people to engage in meaningful community service to enhance their social maturity and their feelings of imbeddedness in their society.

3. *Programs should include components designed to foster meaningful relations between adolescent participants and adults who can serve as mentors.* The facilitation of these relationships serves two distinct purposes. First, because changes in the family, the community, and the workplace have compromised parents' ability to nurture their children adequately, steps should be taken to increase the involvement of other adults in adolescents' lives to restore some of the protective cover that has been eroded over time. Second, the relationships that form between adolescents and their mentors may play an important role in facilitating adolescents' transition into adult work roles by exposing them to models outside the family. This second function may be especially important for youngsters growing up amidst familial disorganization and transience.

Summary and Recommendations

Recent research on the individual, interpersonal, and institutional transitions of adolescence calls into question two common views: (1) adolescence is an inherently difficult time and (2) AOD use stems largely from normal problems young people have in coping with the passage from childhood into adulthood.

Instead, the available evidence suggests that AOD use is best understood as being intricately linked to other types of problem behavior and as a product of specific factors that affect some young people more than others. In other words, some young people have difficulty in making the transition from childhood to adulthood, and these difficulties may be manifested in AOD use. The majority of young people, however, make this transition without experiencing serious problems.

In attempting to distinguish between youngsters likely to have difficulty during the adolescent transition and those who are not, it is helpful to differentiate between risk factors that increase vulnerability to developing problems and protective factors that increase resistance to developing problems. Protective factors are not simply the absence of risk factors; rather, they are characteristics of individuals and their environments that make a positive contribution to development and behavior. Understanding the difference between risk and protective factors is important in designing successful prevention programs, because the program elements intended to minimize risk factors are likely to be different from those that focus on developing protective factors (see exhibit 1).

It may be useful to think of risk factors as variables that define the target populations for prevention interventions and the protective factors as goals for the intervention. Participants would be recruited from groups identified at risk; programs would be designed to achieve outcomes related to one or more of the positive factors. To date, we do not know how to predict the effectiveness of pairing a specific protective factor (intervention) with a particular risk group. Certain pairings seem logical, such as increasing bonding to school among youth experiencing academic difficulties, or fostering a close mentoring relationship between nonfamilial adults and youth at risk because of family problems. This is an area ripe for research.

As a whole, research on the transitional nature of early adolescence suggests both good news and bad news for the practitioner involved in preventing AOD use. The bad news is that the present and changing nature of adolescence in contemporary society has heightened youngsters' vulnerability to AOD use and placed certain groups of young people at great risk for developing AOD problems. Moreover, the trends that have led to this state of affairs are neither receding nor reversing.

The good news is that during the 1980s, new knowledge regarding adolescent development and AOD use prevention emerged, providing useful information about the factors that place certain youth at risk and the programs that are effective in minimizing these youngsters' vulnerability. The challenge for practitioners in the 1990s will be to translate this new knowledge into concrete

Exhibit 1. The most important factors in predicting adolescent AOD use

Risk Factors

Individual

- A prior history of personality problems, especially those related to anger, aggression, impulsivity, or depression
- School failure and academic difficulties, especially if they have resulted in grade retention
- Involvement in other problem behaviors, including precocious sexual activity, truancy, or nondrug criminal or delinquent behavior

Interpersonal

- Distant or hostile relations with parents or guardians
- Familial disruption, reconstitution, and marital conflict
- Membership in a peer group or friendship group that encourages or tolerates AOD use

Institutional

- School transitions that involve movement into a more impersonal, more anonymous, and less protected environment
- Involvement in the part-time labor force in excess of 20 hours per week
- Lack of access to meaningful roles in the community
- Growing up in poverty

Protective Factors

Individual

- Academic success
- A sense of self-efficacy and personal responsibility
- Well-developed social and interpersonal skills
- Adequate decisionmaking skills and intellectual abilities

Interpersonal

- Having at least one close relationship with a parent, teacher, relative, or mentor who can provide both guidance and emotional support
- Membership in a peer group that actively discourages AOD use and encourages academic, athletic, or artistic accomplishment as routes to popularity and status

Institutional

- A sense of bonding to school and other societal institutions
- An acceptance of societally approved values and expectations for behavior

programs. In designing and implementing AOD use prevention programs, several elements have especial importance:

- Target prevention programs to youngsters before they begin adolescent transitions, ideally in the middle elementary school years when youngsters are 9 to 10 years of age.
- Target programs to youngsters at greatest risk (most prone to use of AODs), generally those with the greatest number of risk factors and fewest number of protective factors.
- Tailor interventions to different types of youngsters to remedy specific deficiencies. Protective factors that may make one adolescent resistent to AOD use may not have a similar impact on another youngster.
- Focus more systematically on interpersonal and institutional factors and less exclusively on individual factors. Problems faced by adolescents are profoundly influenced by the environment in which they live.

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Notes

1. Research designs seldom accomplish such isolation. For example, a putative study of school transitions may actually be a hidden study of pubertal maturation; one examining associations between family relations and drug use may confound changes in family relations with changes in peer relations.

2. Prior to the 1970s, transitions into junior high or middle schools were viewed as rather innocuous. The necessity for these separate schools was so widely accepted that few social scientists studied school transitions or their impact. Our ideas about school transitions and their consequences for adolescent development, have, in fact, changed several times over the past 25 years.

CHAPTER 2

Identification of Youth at High Risk for Alcohol or Other Drug Problems

Raymond P. Lorion, Danielle Bussell, and Richard Goldberg

This chapter addresses a question of critical importance to alcohol and other drug use prevention: How can individuals and groups at risk for AOD use be identified? Answers to this question are vital for sound planning at the Federal, State, local, and—especially—individual program levels. Priorities need to be established, appropriate interventions developed, and program participants targeted and recruited. Identification is an essential component of this process. In light of the limited resources available, it is cost-effective to target those youth who are most vulnerable and most in need of AOD use prevention. Also, the extent to which prevention can be safely and effectively applied is determined by the accuracy with which we can predict a youth's risk for AOD use without intervention.

The key to the seemingly simple but highly complex problem of targeting program participants is to translate what is currently known about identifying and assessing youth at risk for AOD use into viable strategies that can be used by planners and programs. This chapter discusses several such strategies, including approaches that use (1) existing data from epidemiologic studies, large-scale surveys, and archival records and (2) data from studies, surveys, or needs assessments developed and conducted by individual programs. Findings on risk factors associated with youthful AOD use are presented as another way of identifying potential program participants.

Definitional Issues and Considerations

Several issues should be considered before a program selects procedures for identifying groups or individuals to be targeted for prevention. The following concepts are of special concern in this chapter:

- Risk and risk factors
- Levels of AOD involvement
- Categories of prevention interventions

- Recruitment procedures across prevention approaches
- The need for a framework
- Limitations of current knowledge

Risk and Risk Factors

The concept of being "at risk" as used here refers to having characteristics or being in a situation that is associated with serious involvement in the use of alcohol or other drugs. Typically, these characteristics and situations have been identified through large sample surveys that show the prevalence of alcohol and other drug problems in a community and how such problems are dispersed throughout the community. Prevalence refers to the total number of cases (i.e., people with the problem) per some unit of the population (e.g., per 1,000 or 100,000 residents). Knowledge of the prevalence of AOD-related problems and how they are differentially present in a population is the basic information for deciding whether to target the intervention to the entire community or to specific segments of it. The term "risk factor" is used to denote an agent that contributes to AOD use. Some factors are causal agents in the sense that use would not occur in their absence. For example, access to alcohol or other drugs is necessary for an AOD problem to occur. Since many youngsters with such access do not use alcohol or other drugs, other, contributory risk factors must also be present. In addition to access, for example, an individual may also have an inherited susceptibility to alcohol addiction, the availability of valued role models who use alcohol, positive attitudes toward such use, and an environment that supports initial steps in the development of regular AOD use patterns.

Thus, causal and contributory risk factors combine to create chains of events that lead to the onset, exacerbation, and maintenance of AOD use. Identifying the elements of such chains (i.e., the prevalence of risk factors in the target community) is essential for the development of viable prevention programs. A long-held public health axiom is that effective prevention is best targeted at the weak links in such etiological chains. A weak link represents any point along that sequence that can be modified to interrupt or abort that sequence.

Identifying factors related to the absence of AOD use may also be useful to some programs. Such protective factors inhibit AOD use (see chapter 1). Rather than attack an identified weak link, planners may choose to devote their resources to efforts that inhibit AOD use, such as teaching youth how to resist pressures to try drugs or effecting inhibitory changes in the environments in which youth spend their time.

Levels of AOD Involvement

AOD involvement ranges across a broad continuum from none whatsoever to life-threatening levels of use. Where individuals lie on the continuum for one substance can, and frequently does, differ from where they are on the continuum for other substances. An individual's place along these continuums is relevant to both program recruitment strategy and the kind of intervention used. Therefore, it is useful to distinguish broadly among abstainers, users, and abusers:

- *Abstainers* are those individuals who have not yet tried a specific substance. Different interventions may be appropriate for two subgroups of abstainers:

  - Those who have never used and have never had an opportunity to do so
  - Those who have never used but have had opportunities to do so

  Each subgroup can be further differentiated by those who think they *might* use given the opportunity and those who believe they would *never* use under any circumstance.

- *Users* are those individuals who have tried or continue to use alcohol or other drugs but who are not dependent or addicted. They also fall into different subgroups:

  - Those who have tried a substance but discontinued use
  - Those who use infrequently and primarily in response to social circumstances
  - Those who use periodically but infrequently enough to avoid dependence or addiction

  Failure to recognize which subgroup is receiving which intervention can produce an inaccurate estimate of program effectiveness. Even worse, it could increase the level of AOD involvement for youth who receive an intervention that is inappropriate for their level of AOD use (Lorion 1987).

- *Abusers* are heavily involved in AOD use. While level of abuse may range from early dependence to life-threatening use, treatment is clearly the appropriate intervention.

In determining level of AOD involvement, each substance needs to be considered separately. Health and mental health risks vary for different substances, as do risks associated with different modes of drug use (e.g., intravenous versus nonintravenous). Also, important individual differences exist in the choice and use of multiple substances. Use of certain substances may be a risk factor for involvement with other substances, as indicated in the gateway model in which use of tobacco, alcohol, and marijuana in early adolescence has a predictive relationship with later use of illicit drugs such as heroin and cocaine (Kandel 1982).

Finally, since youth and practitioners may define risk and level of involvement differently, it is important to survey targeted youth's attitudes and experiences about AOD use. For example, some youth who have discontinued AOD use on their own may not agree that they are at risk; their presumed success in discontinuing use of a substance (or abstaining from another) may blind them to their risk of becoming involved with the same or other substances. Since discontinuing AOD use without assistance is a positive process, care must be taken not to undermine it through recruitment or intervention efforts.

Categories of Prevention

The traditional public health prevention categories—primary, secondary, and tertiary—are easily related to levels of risk and AOD use. Each category refers to interventions intended to reduce the number of cases of a disorder in a particular population or group; they differ in the aspects of prevalence that they address. The level of intervention a program selects will determine, in part, how its staff identifies and recruits participants and defines the program's goals.

Primary prevention efforts are targeted to those who are not yet symptomatic and are typically provided to subgroups of the population assumed to be at risk, rather than individuals. These efforts are intended to avoid development of a disorder, such as alcohol or other drug use. Primary prevention efforts of interest here would be targeted to abstainers and youth at the lower end of the AOD use continuum. Such interventions are best evaluated in terms of demonstrated reductions in expected incidence rates (i.e., the number of new cases in a defined time period) among program participants compared to nonparticipants within a defined subgroup or population or between test units, such as school systems or communities (see, e.g., Pentz et al. 1989).

Secondary prevention efforts are targeted either to those who display precursors of dysfunction or those who show early symptoms of dysfunction (Lorion and Allen 1989). Through early detection and intervention, one can attempt to abort an ongoing etiological process. For example, using Kandel's (1982) gateway theory, one might identify and intervene with adolescents who use tobacco to reduce the chance of their becoming involved with alcohol. Through early case-finding procedures, prompt treatment can be provided at the earliest moment following symptom appearance. Many disorders are highly responsive to treatment in their early stages. For example, identifying youth suffering from cocaine withdrawal, and providing prompt treatment, may help avoid more serious involvement with cocaine. If intervention is effective, the disorder is not avoided but its duration is shortened. Thus, prevalence is reduced, since cases are counted for only relatively brief periods.

Tertiary interventions are targeted to those who are addicted to or dependent on alcohol or other drugs. Following treatment, such interventions (frequently referred to as rehabilitation) assist their recipients in avoiding relapse into AOD use. Potential recipients may be identified by treatment providers; in some instances, the tertiary prevention program is mandated by the treatment provider or by some social agency (e.g., by the court). Successful tertiary prevention allows cases to be removed from the prevalence figures sooner than would have been likely without the intervention.

Recruitment Procedures Across Prevention Approaches

Recruitment procedures, as Gordon (1983) noted, are highly related to a program's explicit goals. In fact, Gordon proposed categorizing programs on the basis of selection criteria. He delineated three types of intervention; the first two necessitate recruitment and, thus, identification or assessment of risk, while the third does not.

1. *Selected interventions* target and recruit members of a subgroup that has been identified as being at risk by epidemiological data. Selection is based on group rather than individual factors. For example, if being a member of a minority group and having parents who are heroin addicts are associated with increased level of AOD use, then individuals with those characteristics would be invited to participate in the intervention.
2. *Indicated interventions* are offered to individuals based on results from direct individual assessments. For example, a youth whose score on an alcohol screening instrument exceeds the cutoff point for "no problem indicated" would be invited to participate.
3. *Universal interventions* are targeted to the general population or a specific subpopulation in which all members are eligible. No recruitment is required. Examples include media campaigns aimed at the general population and mandatory drug education programs offered in the classroom.

For most programs, selected intervention—that is, identification and recruitment of subgroups at risk—is recommended. Indicated interventions—focusing on individuals—are costly. Gordon (1983) suggested three reasons for not using universal interventions. First, program costs may limit the number of individuals who can be served. Second, they pose the potential risk of increasing alcohol and other drug use among some individuals. Third, the intervention's procedures may need to be designed specifically for its recipients (e.g., the contents of an education program for those who have already tried a substance).

The strategies presented below for identifying youth at risk are most suited to the selected interventions and, to some extent, the indicated interventions. They are of limited use to those involved in universal interventions. However, even when individuals are not recruited, programs may choose to identify target areas or target settings where risk is likely to be high in the general population. In such instances, approaches for using epidemiological and, especially, indicator data are useful.

The Need for a Framework

The issues discussed thus far provide a beginning framework for developing a procedure for identifying, selecting, and recruiting youth into prevention programs. Program planners should answer the following sequence of questions:

1. *What are the specific goals of the intervention with respect to AOD use*? Is the goal to inhibit initiation of use (primary prevention), to help youth discontinue use before they become dependent (secondary prevention), or to rehabilitate youth who are dependent or addicted (tertiary prevention)? The answer to this question will determine, in large measure, the ways participants will be identified and recruited into the program.
2. *Is the intervention to be targeted to subgroups (selected intervention), to individuals (indicated intervention), or to a general population (universal intervention)*? The first two will likely require different methods for identification. Typically, programs use analyses of existing survey data to identify subgroups for selected intervention and screening or assessment batteries for individuals for indicated interventions.
3. *Do the intervention procedures depend on the AOD use of individuals or of groups*? If intervention depends on individuals' involvement, recruitment will require assessment of AOD use patterns. If intervention depends on a subgroup's involvement, recruitment can be based on selected characteristics (e.g., age, gender, neighborhood) of groups who are assumed to have the level of AOD use targeted (e.g., never used, regular users).
4. *Which substances are to be targeted by the intervention? If multiple substances are targeted, in what sequence will they be considered*? Since groups and individuals who use different substances—or multiple substances—are likely to differ in many ways, methods for identifying and recruiting them may also vary.

Limitations of Current Knowledge

Program planners should keep in mind the limitations of our current knowledge base and risk assessment procedures. Estimating risk is, itself, not without risk. Available risk information is based on studies of groups of people, rather than specific individuals, who have reported various alcohol and other drug use/nonuse patterns. Applying that information to individuals means relating their chances of using alcohol or other drugs to that of the members of the original reference group. This inference of risk is not, however, evidence that alcohol and other drug use has or will occur for a specific youngster. Ignoring that distinction can make screening hazardous.

Programs must appreciate the significant negative consequences for a child whose estimate of risk is mistakenly interpreted as actual or inevitable alcohol or other drug use. Insofar as risk is assumed to be synonymous with AOD involvement, the potential exists for stigma and self-fulfilling behavior.

Current knowledge of factors associated with the prediction of AOD involvement among children and youth is limited. We cannot yet fully explain how or why some youngsters move from being nonusers to users, or why some discontinue use voluntarily while others go on to become abusers, or why some use only one substance while others use two or more. Evidence on the predictive accuracy of risk estimates based on combinations of risk factors is especially sparse. Also, factors that predict experimentation with substances do not necessarily predict problem use or abuse. Prospective studies (collection of data before use or symptomatology begins) are being initiated; their findings should help in selecting youth who are most likely to initiate or continue AOD use.

Complicating the predictive task is the fact that involvement with one substance does not necessarily generalize to others (Fors and Rojek 1983). In a recent survey that we conducted, for example, nearly half of those reporting heavy use of alcohol (i.e., five or more times in the past month) used no other drug. Cocaine users did not necessarily use marijuana; PCP users did not necessarily use cocaine; and so forth. However, most users of illicit drugs also used alcohol, and most nonusers of alcohol used no other drug.

Tools for assessing and identifying youth at risk are often of questionable reliability and validity. While many tools are available, their ability to provide consistent information across different administrations of the instrument to the same individuals (reliability) is, typically, either unknown or below acceptable statistical levels. Also, the extent to which the tool measures what it is intended to measure and reflects reality (validity) is often poor or unknown. Assurance of the accuracy of the estimation of future behavior (predictive validity) is seldom established for assessment tools; nor is it usually known for estimates based on epidemiological or large-scale survey data (though one can use statistical procedures to obtain a level of confidence in one's estimate).

For these reasons, those responsible for the delivery of prevention services must translate for themselves what is known about developmental, cultural, and ecological correlates of alcohol and other drug use to estimate the risks in the populations they serve. They must do so within the bounds of their access to potential participants, the willingness of community members and settings to cooperate with selection procedures, and the justifiability of diverting a portion of service funds to recruitment activities.

Methods for Identifying Youth At Risk

This section presents two general approaches to collecting information that can be used to help identify youth at risk for AOD use. One approach involves analyses of existing epidemiological, large-scale survey, or indicator data. The second involves direct data collection by programs attempting to identify and recruit youth (or families) into prevention programs; methods for using both secondary and primary sources of data are described.

Analyses of Existing Data

Several types of data collected by governmental agencies, schools, social service agencies, law enforcement agencies, other human resource entities, and research programs may be useful in helping to estimate AOD use and risk factors among subgroups of youth. Often such data reveal a good deal about the likely demographic characteristics—such as age, gender, and race/ethnicity—of youth in different risk categories. Census data (available in some areas at the city block level) can subsequently be used to determine the demographic characteristics of a selected age group within a defined area targeted by a prevention program.[1] The National Institute of Mental Health has used decennial census data to develop a social indicator model—the Mental Health Demographic Profile System (MHDPS)—that permits planners to characterize populations in geographical areas to determine areas of high risk and estimate needs for services (see Goldsmith and Unger 1970; Goldsmith et al. 1982). Computer tapes containing these data are sent to States for planning and needs assessment activities. Several types of social indicators used in the MHDPS may be useful in any model designed to use census data:

- Economic status (such as average family income or the proportion of the population in poverty)

- Social status (such as the proportion of adult men and women in high and low occupational statuses)
- Educational status (such as the proportion of the population that has completed high school)
- Family life cycle (such as the proportion of female-headed households or the proportion of families with children under age 6)
- Family status (such as marital status or household size)
- Residential lifestyle (such as the proportion of certain types of housing or housing conditions)
- Mobility (such as the proportion of individuals born in the State or the proportion of recent immigrants)
- Area heterogeneity (that is, the variability in demographic characteristics within defined geographic areas)

These indicators can be used in conjunction with other methods described in this section and are especially useful in conducting a needs assessment (see, e.g., Warheit 1979).

Epidemiological, Large-Scale Survey, and Special Population Research

Through library searches and checks with State, county, and municipal agencies, prevention personnel may find that government entities have conducted research on AOD use among youth to determine the prevalence of problem use (epidemiological research) or differences between current and projected future level-of-use indicators and desired levels of the indicators (needs assessment) for resource planning. Some States provide statistically sound data by area (e.g., catchment area, county). Some also conduct surveys of school students by grade. In addition, the National Institute on Drug Abuse (NIDA) sponsors an ongoing, nationwide survey of AOD use among secondary school students (see, e.g., Johnston et al. 1989) as well as a national household survey of AOD use that samples youth as well as adults (e.g., NIDA 1990). NIDA is also supporting a survey of AOD use among American Indian youth (Beauvais et al. in press) and has cooperated with other Federal agencies in the Hispanic Health and Nutrition Examination Survey (HHANES) to gather use-age data on selected substances among individuals in Hispanic households (NIDA 1987).

While data from these studies do not always pinpoint specific areas (e.g., counties, cities) or neighborhoods surveyed—or, if they do, may not be sufficiently representative of the subarea population—they may provide some of the following types of information.[2]

- The prevalence or extent of use of different substances among youth
- Demographic characteristics of subgroups of users—age, gender, race/ethnicity
- The physical, psychological, or social consequences of AOD use (especially if the study is an epidemiologically based effort)
- The incidence of the disorder (number of new cases)
- Information on treated cases and resources used to locate or treat cases (epidemiological and/or needs assessment efforts) (see Richards 1985)

AOD Use Indicators

Indicators that reflect AOD use may indirectly represent antecedent, current, or subsequent aspects or consequences of use. A large number of data systems or archival records that States, counties, and cities use for planning and assessment of AOD use have proven useful (see NASADAD 1985; Richards 1985). Like demographic indicators from census data, indirect indicators of AOD use often have limitations. Some problems are specific to a particular data base; others may not apply to all types of indicator data.

One general consideration is the timeliness of the indicator data. For example, data may not be time sensitive enough to reflect the relatively recent epidemic of crack use. Some indicator data may not be sensitive to factors that influence drug use patterns, such as ethnic group differences or geographic differences in the accessibility or use of various substances. A data base representing a large region comprising urban, rural, and suburban areas, for example, would likely make rates of crack use seem relatively low in the total regional population since crack usage is primarily an urban phenomenon (a factor related to accessibility of the drug). Similarly, solvent usage may appear low in this regional population since it is most prevalent in rural areas. Also, some data are likely to be of limited value in assessing risk among youth because the figures primarily represent adults. This is especially likely for the first seven sources listed below (with the possible exception of youthful Driving While Intoxicated (DWI) cases covered in the fourth entry):

1. *Vital statistics on deaths* from primary and secondary causes classified as drug-related in the International Classification of Diseases. These are available on an annual basis for small areas. The categories are, however, contaminated by cases of those who died from suicide or accidental poisoning by licit drugs. At the local level, similar data may be available from the medical examiner or coroner. These deaths are not perfectly correlated with use but are sensitive indicators of levels of AOD involvement.

2. *Hospitals and emergency rooms* have data systems on episodes associated with nonmedical use of psychoactive drugs.
3. *Drug prices and purity of street drugs* are types of data available from law enforcement agencies; usually low or declining prices of heroin, for example, or high or increasing purity levels are harbingers of a drug epidemic. Like arrest data (below), these data are not scientific; they depend upon the intensity of police efforts.
4. *Alcohol- and other drug-related arrests,* including arrests for sale and possession of illicit drugs or DWI, while they reflect only those who get caught, can nevertheless be important indicators.
5. *Police records* on juvenile delinquency and on areas of social pathology, including high AOD use, may assist in identifying groups or neighborhoods with youth likely to be at high risk for AOD use.
6. *Urinalysis test results* are available in a few areas for arrestees, prisoners, probationers, and parolees; the data can be useful in monitoring drug use patterns.
7. *Hepatitis B* prevalence figures, in conjunction with other indicators, may be useful as a barometer of nonsterile needle use practices and drug abuse/addiction.
8. *AOD abuse treatment* data on youthful clients (rates under treatment) may also provide useful indicators of AOD use patterns.
9. *School records* on suspensions, expulsions, truancy, unexcused absences, academic performance, or other indicators related to risk factors or youths' use (or sale) of alcohol or other drugs may prove useful.
10. *Child protective service* records related to placement of children in foster care because of their parents' AOD use may identify a special target population for prevention.
11. *Health records*: infants born to drug-addicted or alcohol-dependent women, teenage pregnancies, injuries associated with gang violence, chronic physical disorders among youth, abused children and youth, and so on might identify groups to be targeted for primary prevention.

Data sources like those just listed only provide indicators of risk; however, singly or in combination, they may give useful information on patterns and consequences of AOD use and the demographics of groups in the risk indicator categories. Obtaining such data may require careful planning and negotiation. Some institutions may resist providing information to outsiders, especially if their staffs fear that the data may reflect adversely on their programs or services. Reluctance may be overcome by working with the institutions to satisfy their requirements for confidentiality and anonymity and reporting of data. It is helpful, too, to ally oneself with an insider to access information.

Small-Scale Research Studies

The literature on youthful AOD use is replete with studies conducted on small, selected populations. Many of these studies are cited in this chapter and elsewhere in this volume. Findings from these studies can be used to help identify subgroups likely to be at risk and the specific types of risk factors that may be prevalent among them.

Collecting Your Own Data

Numerous methods for collecting data directly from the community, or from youth themselves, can be useful in identifying youth at risk or estimating the extent of risk or AOD use. Approaches include (1) ethnographic studies, (2) key informant surveys, (3) community forums, (4) field surveys, (5) study data from direct assessment of individual youth, including (6) use of a composite index method to enhance predictive power, (7) needs assessment, and (8) a triangulated approach study.

Ethnographic Studies

Ethnography is a method of obtaining a firsthand, up-to-date understanding of a community and its culture—including the activities, attitudes, patterns, and social organization of its people. Feldman and his colleagues (1985) pointed out that ethnography is as much art as science. Untrained persons can be guided in using ethnographic methods and techniques, gathering information about communities and people through direct observation and personal interviews.

Through this approach, one can directly observe, record, and analyze descriptive information collected from an ethnographer's insider perspective (see, e.g., Fetterman 1989). This approach has been used, for example, to keep track of the ebb and flow of the street drug culture in New York City (Lipton 1989). Ethnographic studies are valuable supplements to survey and client data. They can provide qualitative information on the meaning and context of changes in AOD use patterns, types of individual users, and practices of AOD users as well as information on nonusers in the community. The detailed impressions of ethnographic reports can help planners and service providers better understand their community's needs and potential for effective interventions.

Those interested in obtaining more information about ethnography should consult Agar (1973), Akins and Beschner (1980), Feldman et al. (1985), Fetterman (1989), Hughes (1977), Plaut and Reeves (1976), Waldorf et al. (1977), and Weppner (1977).

Key Informant Surveys

Using a questionnaire or interview schedule, critical gatekeepers can be contacted to provide information about youth at risk. Key informants might include personnel in schools (e.g., nurses, counselors, teachers), AOD treatment programs, runaway shelters, social service agencies, health clinics frequented by young people, organized youth organizations (e.g., 4-H, Boy Scouts, Girl Scouts, clubs), law enforcement agencies, and churches as well as such informal sources as owners of businesses where youth hang out, youth leaders, and other community leaders. Administrators and directors of service organizations may be good sources of information about problems in delivering services to youth.

Community Forums

A well-coordinated community forum can permit youth and their families to talk openly about issues contained in a fairly structured agenda. An anonymous questionnaire might be administered at the end of the forum to elicit more detailed information of interest to a prevention program. These forums require a skilled group leader and are more likely to be effective if held in accepted organizational structures (e.g., schools, churches) over several separate meetings.

Field Surveys

Programs may wish to develop their own instruments for use in surveys designed to gather specific information on youth and AOD use. For example, a program's goal might be to have experimental users discontinue their use, but resources are available to target only a limited number of youth in school settings. Program designers might consider using a very simple and low-cost survey to identify which grades or schools have the highest prevalence of experimenters or youth considering trying a substance. The following two questions might be repeated for each substance of concern:

1. During the past month, how many times have you used alcohol [or substitute, e.g., marijuana, cocaine/crack, PCP]?

   ☐ I have never used alcohol

   ☐ I have used alcohol but not at all during the past month.

   ☐ I have used alcohol 1 or 2 times.

   ☐ I have used alcohol 3 or 4 times.

☐ I have used alcohol 5 or 10 times.

☐ I have used alcohol more than 10 times.

2. During the next 3 months, how likely do you think it is that you will use alcohol?

☐ Not at all likely

☐ Probably not likely

☐ Somewhat likely

☐ Pretty likely

☐ Very likely.

By comparing responses to the two questions above, it will be possible to estimate—for each substance—both the number of nonusers at risk for initiating use and the number of users thinking about discontinuing use. The results can be used to target specific grades and to determine which substances are currently most attractive to the youth being surveyed. If the information is to be used in the design of specific intervention procedures, questions can be added about gender, race/ethnicity, and other important characteristics.

It should be kept in mind that collection of highly sensitive information can also be reactive. Reactivity refers to the fact that information gained depends in large part on how it is sought. Answers change depending on who asks the question, who will see the answers, and assumptions about reactions to those answers. Reactivity lowers both reliability and validity of the information. Therefore, the survey should be anonymous (e.g., contain the instruction "do not place your name anywhere on this form") and private (e.g., the completed forms are returned in sealed, unmarked envelopes). The fewer the questions, and the less it seems likely youth can be identified by their responses, the higher the likelihood that youth will complete the form and report truthful information.

Programs that prefer to collect their own data through surveys might wish to review existing instruments that are readily available and commonly used to collect information from youth on AOD use and other problem behaviors. A number of different questionnaires used in surveys of youthful AOD use and related behaviors are presented in *Drug Abuse Instrument Handbook* (Nehemkis et al. 1982) and the *Treatment Handbook Series* 1 and 2 (Lettieri et al. 1985*a*, 1985*b*).

The survey approach can be used in other settings and with other groups (e.g., parents). It is useful because it permits programs to gather information specific to their needs. In order for surveys to be most reliable and valid, experts in sampling, instrument design, and other survey-related activities should be involved in design and analysis of the survey data.

Direct Assessment Studies

In this approach, a program would use existing psychometric batteries or their own assessment tools to collect information that could be pooled to develop profiles of youth at risk. (Again, a sampling expert should be consulted if the data are to be representative of a particular population; other research specialists should be involved to assure reliability and validity.)

A few screening and assessment tools are contained in the Nehemkis and Lettieri handbooks.[3] Some have been developed since the publication of these documents. Two recent packages are of potential interest:

- *The Adolescent Drinking Inventory. Drinking and You* (ADI). This standardized, 24-item instrument measures the severity of an adolescent's drinking problem and contains two subscales: (1) REBEL, an indicator of aggressive, rebellious behavior while drinking and difficulty with others (especially authority figures) and (2) MEDICATE, an indicator of drinking to alter mood (e.g., to cope with negative feelings or achieve positive mood states). The instrument has high levels of reliability, criterion validity, sensitivity, and specificity,[4] and norms are available for the normal population of both males and females aged 12-15 and 16-17 and for white, Hispanic, and African American/other youth. Norms are also available for treatment groups (residential, inpatient, outpatient). The ADI screener can be self-administered (typically in 5-8 minutes) or used as an interview; scoring is simple with cutoff points indicating need for further assessment (see Harrell et al. 1989). The instrument is available from Psychological Assessment Resources, Odessa, Florida. Test booklets include self-scoring carbonless sheets.
- *The Minnesota Chemical Dependency Adolescent Assessment Package* (MCDAAP) consists of three separate tools:
  1. The Personal Experience Screen Questionnaire (PESQ)—a 35-item self-administered questionnaire that screens for severity of chemical involvement; it also briefly addresses psychological problems and faking tendencies. The PESQ is now available,[5] requires 15 minutes to administer, and its scores are highly predictive of scores on problem severity contained in the larger questionnaire (see 3 below). School and drug clinic norms are available.
  2. Adolescent Diagnostic Interview (ADI)—a highly structured interview schedule designed to assess for DSM-III-R (APA 1982) psychoactive AOD use disorders, level of functioning, and severity of psychosocial stressors; it briefly screens also for other mental disorders and reading, memory, and orientation problems. Reliability and

validity appear acceptable. It requires 45-60 minutes to administer and is available from Western Psychological Services (Winters and Henly in press).

3. Personal Experience Inventory (PEI)—a 300-item self-administered questionnaire that determines extent of AOD use/abuse by providing clinical scales and a detailed history of drug onset/frequency of use. It also measures psychosocial functioning related to patterns of drug use and treatment responsiveness and screens for selected problems (e.g., physical and sexual abuse) and faking tendencies. Norms (percentile and T-score) on nearly 2,000 adolescents are provided by age and gender, and a computerized scoring and interpretation system has been developed. The PEI is currently available from Western Psychological Services, Los Angeles, California (Winters and Henly 1989; Winters et al. 1989).

The PESQ, ADI, and PEI can be used as an assessment system at various points in the referral-treatment system. The PESQ is useful in preassessment or short intake as a screener; the ADI and PEI should be used when a more complete followup assessment is indicated by the PESQ. The package is intended as a clinically oriented, standardized assessment battery that will assist in identification as well as referral and treatment of problems associated with teenage AOD use.

Composite Indices

Whether the intervention is targeted to individuals or groups, confirming estimates of enhanced risk with independent criteria provides some degree of reassurance about the potential consequences of not intervening. Specifically, Bry (1983) found that the total number of risk factors that apply to an individual is a better predictor of future AOD involvement than any single risk factor. Robins (1978) also found that the total number of antisocial behaviors a person engaged in during childhood was a better predictor of adult AOD abuse than other (family) factors.

Loeber and Stouthamer-Loeber (1986), in their work on the prediction of delinquency, developed a multiple-gating procedure that prevention planners may choose to consider. This strategy incrementally refines risk estimation through the sequential collection of information from multiple sources. The concept is to reduce the number of youngsters defined as being at risk at each new gate. For example, large samples of preadolescents may be screened using teacher ratings or self-report scales that measure attitude, knowledge, or behavior patterns associated with future AOD use.

Youngsters whose ratings fall above a predetermined cutoff score are then examined at gate 2. A phone survey of the mothers, for example, may identify those youth whose familial backgrounds or behaviors around the home and neighborhood are associated with risk for AOD use. Obviously, confidentiality of responses, the potential for stigmatizing high scorers as "druggies," and the possibility of false predictions must be considered and addressed before progressing to the next gating procedure.

Individuals identified at gate 2 as possessing problematic behaviors would then proceed to gate 3; the other youngsters would be dropped. At gate 3, youth would be individually interviewed to determine whether they display specific psychological or behavioral patterns associated with AOD use. Through this three-gate process, those most at risk are identified from among a large sample of individuals.

Such a gating procedure may be unnecessarily time-consuming and costly for the majority of AOD prevention programs. Numerous logistical and confidentiality issues must be confronted. This would be especially true for programs designed to reduce the likelihood of initiating alcohol use, given the high proportion of adolescents likely to do so. In this instance, all members of a group, for example, the students in a high school, would be considered at sufficient risk to merit program involvement. Typically, subgroup-focused approaches do not require a selection procedure as elaborate as Loeber's gating sequence.

The multiple-gating procedure might be adopted as a method for monitoring the risk levels of particular segments of the population. Specifically, one might schedule a repeated set of probes over many months to assess whether additional risk factors are impinging on and altering an individual's vulnerability. For example, ongoing regular use of alcohol or the presence of an older sibling involved with AODs is an important individual risk factor. If prevention resources are limited and intended to be focused on those most at risk, either or both of these characteristics may be used as an initial gate. Having thereby reduced the pool of potential program participants, one might proceed to design two or even three additional gates for arriving at the number of youngsters with enhanced risk whom the program can adequately serve.

Needs Assessment

Prevention programs interested in identifying not only youth at risk, but also their needs and the resources that are available to meet these needs, might conduct a needs assessment. This procedure has many of the elements of an epidemiological study but is mainly concerned with resources and future directions. In the AOD field, needs assessments are designed to reveal the following:

- Incidence and prevalence of the problem

- How the problem affects the community
- Who needs help
- What additional type of services are needed
- What resources are needed to address identified needs

Several methods are appropriate for assessing needs:

- Key informant surveys
- Community forums
- The rates-under-treatment approach
- The social indicators approach
- Field surveys

Needs assessments can help planners address the following questions:

1. How many prevention programs of what kind are needed? How does the need vary among subunits (e.g., neighborhoods, counties)?
2. How many target youth are expected for the program? How does this vary by subunit? Are the numbers increasing or decreasing?
3. What types of youth at risk for AOD use are currently underserved by existing programs? How does this vary by subunit?
4. How much money will be needed to hold the status quo? How should it be distributed among subunits?
5. How much additional money is required to satisfy unmet needs? How should it be distributed?
6. How many persons with what types of skills are needed to operate current programs? How many more are needed for unmet needs?

Such questions are best addressed at macrolevels (e.g., government agencies). However, they can be addressed on a smaller scale by individual prevention programs. Staffs of individual programs might help funding agencies in their areas or States plan and conduct needs assessments that include their target communities (with the stipulation that they are provided information specific to their target populations or target areas). Useful sources for planners considering a needs assessment approach include Bell et al. (1982), Goldsmith et al. (1988), and Warheit (1979).

A Triangulated Approach

Lipton (1984) proposed an approach, centered on a particular question, that could identify groups at risk. This triangulated approach, used in New York State, gathers data from three sources:

1. Direct surveys—household, school, special surveys
2. Monitoring of indirect indicators—such as emergency room episodes, alcohol- and other drug-related arrests, admissions to treatment programs, and so forth
3. Ethnographic studies

This approach rests on the assumption that no one data source or strategy is reliable enough to make good decisions.

Factors That Place Youth at Risk

Research points to a number of different factors that appear to increase the likelihood that youngsters will become involved in the use of alcohol or other drugs or become dependent upon these substances. Prevention program planners can consider these risk factors in developing methods for identifying target groups. Or, if time or resources prohibit the opportunity to develop and use the methods described in the last section, program staff can select subgroups based on the kinds of risk factors presented below.

Several caveats are warranted in relation to using these risk factors:

- This chapter does not provide a comprehensive survey of the research literature.
- The research literature on this subject represents a diversity of populations, both in sample size and types of individuals/groups studied, and a variety of methods, hindering generalization of the findings to specific subgroups (and to individuals).
- Research on drug use patterns lags behind street use. None of the studies to be cited specifically looked at crack or at cocaine use during pregnancy.
- Alcohol and other drug use patterns are influenced by regional, neighborhood, ethnic, and social class factors, among other variables. Specific drugs of use may vary. For example, use of crack is more prevalent in urban areas (Johnston et al. 1989), and methamphetamine use is higher in Hawaii, the Southwest, and on the West Coast (NIDA 1988).
- The research findings cannot be used to predict, with any known level of accuracy, which youth in any at-risk group will actually become involved with alcohol or other drugs.
- The various factors, while associated with increased risk for AOD use, do not typically have predictive value with regard to which substance or combination of substances is likely to be used by youth.

- The factors presented are often interrelated in the sense that more than one of them is present in the lives of many youth and may interact in ways that increase or decrease risk.
- Many of the risk factors associated with AOD use are also associated with other problems (e.g., juvenile delinquency, teen pregnancy, suicide), which makes it difficult to clarify whether AOD involvement contributed to the development of other problems or is a consequence of other problems.

There are likely to be several community agencies that will collaborate with AOD prevention programs to help identify areas with high prevalence of children and youth whose lives are characterized by one or more of the risk factors to be discussed in this section (see exhibit 2).

Schools are likely to be especially valuable allies in helping to select neighborhoods, schools, and even classrooms to target for prevention interventions. Teachers (as well as parents) may provide ratings of risk behaviors among individual youngsters; those showing the highest levels of risk for a selected risk factor (e.g., aggression) might be given priority in recruitment, especially if resources limit the number of youngsters that can be served. Strategies for obtaining such ratings are described in Kellam et al. (1983), Lorion et al. (1987), and Spivack (1983). Given the complexities involved in these rating procedures, interested readers are urged to contact one or more of these researchers to request advice with scoring and interpretation (possibly in return for use of a program's results for norming existing records).

Risk factors identified in the literature, and discussed briefly below, represent both broad sociocultural and familial influences on child development as well as factors more specific to the individual.

Economic Disadvantage

Economic disadvantage places youngsters at risk for AOD use for a variety of reasons that go beyond the simple lack of money (Lorion and Felner 1986). The following factors are highly associated with both economic disadvantage and AOD use:

- Frequent exposure to AOD use by peers and adult models—especially if such exposure is accompanied by easy access to substances and pressure to use them
- Frequent exposure to the sale and distribution of illegal substances by individuals who, through this trade, become models of economic success
- Marital distress and family disruptions

Exhibit 2. Sources of data on risk groups

Risk group	*Data source*
Children at biological risk	Agencies that provide services to parents or adolescent (sibling) AOD users
Offspring of parents with affective disorders	Mental health centers
Siblings of AOD-using adolescents	Rehabilitation agencies and parents of agency clients
Children likely to be aggressive and shy or to experience learning disorders or other academic problems	Teachers and parents, special education classrooms
AOD-using youth	Health facilities (e.g., emergency rooms); AOD-abuse treatment facilities
Delinquent youth	Police, juvenile courts; hospitals (e.g., for gang injuries)
Children in dysfunctional families	Social services, protective services
Pregnant teens	Hospitals, social services
Infants born to addicted mothers	Obstetrical units

- Health problems that may be alleviated by AOD use
- A crisis-laden existence that is experienced as inescapable, tense, and emotionally demanding—one from which alcohol or other drugs promises relief, however brief

Race/Ethnicity

Using national survey data on AOD usage among youth, one might predict that the following racial/ethnic groups are, in the order shown, at greatest risk for AOD use:

- American Indians
- Whites
- Hispanics
- African Americans (Beauvais et al. in press; NIDA 1988, 1989*a*).

The extent to which these surveys sample school dropouts is unknown, and special populations such as homeless and institutionalized youth are not represented. There are reasons to suspect, however, that African American and Hispanic youth may be at greater risk for AOD use than national surveys indicate:

- The 1986 high school survey indicated that African American youth were more highly involved in some types of AOD use than white youth. African American seniors were more likely than whites to report using heroin 40 or more times in their lifetime (0.3 versus 0.1 percent) and to report using marijuana or hashish on a daily or nearly daily basis 10 or more times in their lifetimes (5.8 versus 0.6 percent). Further, more African Americans than whites reported using marijuana or hashish "Because I am 'hooked'—I have to have it" (5 versus 2.4 percent).
- The highest rate of perceived risk-free cocaine experimentation is among youthful African American and Hispanic males (10 percent in each group feel there is no risk).
- Among all age groups during 1985-88, the prevalence of current and lifetime use of cocaine increased only among Hispanics.
- Among individuals aged 35 and over, African American males have the highest prevalence of lifetime and current use of illicit drugs.
- Data from emergency rooms and medical examiners indicate that African Americans and Hispanics are more likely than whites to use drugs that have adverse health consequences or result in death (NIDA 1989*a*).

Such figures indicate that predicting risk by race/ethnicity is complex. The complexities increase if one examines prevalence figures by type of substance and ethnic subgroup (e.g., Mexican-American versus Puerto Rican, see NIDA 1987). There is some indication that drug education in schools has a greater prevention impact on African American than white students, though the high school survey indicates that African American students are less likely than white students to receive drug education in schools (NIDA 1989*a*). Recently, the authors have collected data suggesting that preadolescent members of minority groups are less likely to experiment with drugs than white adolescents.

Familial Factors

Several familial factors are associated with AOD use or addiction and dependency among children and youth:

- Being born addicted because of the mother's addiction
- Susceptibility to dependence by virtue of being a member of a family in which alcohol dependence or drug addiction spans one or more generations
- Being a member of a family with a history of depression (especially unipolar), since a predisposition to affective disorders may lead to seeking relief through alcohol or other drugs (Sparrow 1988)
- Being a member of a family where parents hold favorable attitudes toward AOD use (Kandel 1980; Needle et al. 1986) or in which parents, themselves, model use of alcohol or other drugs (Johnston et al. 1984; Kandel 1980; Kandel et al. 1984) or disrupt or abandon family rituals (e.g., holidays) because of their AOD abuse (Wolin et al. 1980). The same association is found between adolescent cigarette smoking and parental smoking behavior (Bloom and Greenwald 1984).
- Being a member of a family marked by marital discord (Simcha-Fagan and Gersten 1986)
- Being reared by parents whose discipline is slack, inconsistent, or authoritarian (Baumrind 1983; Glynn 1981; Kandel et al. 1986) or without maternal involvement (Kandel 1980), perceived warmth, or closeness (Kandel et al. 1986; Jessor and Jessor 1977; Needle et al. 1986)
- Having older siblings who actively use alcohol or other drugs (Needle et al. 1986) or provide AODs to younger siblings (Clayton and Lacy 1982). Risk appears directly related to the number of older siblings who use drugs; however, simply having an older sibling appears related both to use and to an earlier initiation into AOD use (Needle et al. 1986).

Some of the above factors seem more strongly associated with risk for AOD involvement than others. Familial patterns of abuse, for example, are well documented in the literature as risk factors for AOD use in offspring. In a review of sibling, twin, and adoptee studies, Kumpfer (1988) noted that children whose familial history included AOD abuse appeared to have a different physiological response to alcohol or other drugs than offspring of other families; for some individuals with a familial history of AOD abuse, relatively small amounts of a substance produce an effect, whereas larger amounts are required for other individuals from such families. Children from families with a history of alcoholism are 4 to 5 times more vulnerable to alcoholism than those in the general population (Goodwin 1985), and sons of alcoholic fathers are up to 9 times more prone to alcohol problems than sons of nonalcoholic fathers (Bohman et al. 1981; Cloninger et al. 1981). Further, children from families with a history of alcoholism present signs of alcohol dependence at a younger age and have a more severe form of dependence with a more rapidly escalating course than do non-familial alcoholics.

The association between youthful AOD use and family structure is less clear. While Simcha-Fagan and Gersten (1986), among others, reported an association between marital discord and children's AOD use, Fors and Rojek (1983) found that whether a family is intact or not (e.g., divorced) does not predict use. Hawkins et al. (1985) concluded that family structure is a less important predictor than is attachment (or lack of attachment) to parents, and Wolin et al. (1980) pointed to the protective influence of a shared group identity that is nurtured when families protect their most important ritual activities (such as holidays, summer vacations, dinnertime) from the destructive impact of parental AOD abuse. While positive parent-child interactions appear to be an important protective factor in inhibiting initiation into AOD use, authoritarian childrearing practices and parental drinking behavior are stronger predictors of youthful AOD use (Glynn 1981).

Further, parents' influence on their children's AOD use may be somewhat substance specific. Kandel (1985) found that, while peer influence is a significant factor in initiation into marijuana use, parental factors gain importance in the transition from marijuana to other illicit drugs. Similarly, Bloom and Greenwald (1984) reported that, while experimentation with cigarette smoking is most likely to occur within peer networks, experimentation with alcohol frequently occurs in the family context.

Peers

Friends and agemates appear to have a significant influence on AOD use, though the relative influence of peers versus parents and parental models seems to vary by the developmental phase of adolescence and the stage of drug use (Needle et al. 1986). The developmental changes of puberty, and the adolescent's uncertainty about how to handle them, may increase responsiveness to peer models and influence (Kandel 1985). Peer influence seems greatest for marijuana (Kandel 1985) and cigarette use (Bloom and Greenwald 1984). Further, favorable attitudes toward use among peers appear to be potent predictors of drug involvement (Hawkins et al. 1986; Needle et al. 1986), and a positive (statistical) relationship has been reported between adolescents' perceived level of peer use and their own use (Jessor and Jessor 1978). Association with

AOD-using peers is consistently cited as the strongest predictor of adolescent AOD use (Elliott et al. 1985; Jessor et al. 1980; Kandel 1982). Moreover, Needle et al. (1986) found that adolescents cite peers as their primary source of access to alcohol and other drugs; peers, in this longitudinal study, were also the most frequent co-users for adolescents. Having older peers increases risk for AOD use (Blount and Dembo 1984), especially when older peers use marijuana and alcohol (Needle et al. 1986).

Gender

AOD involvement is reportedly greater among youthful males than females (Kellam et al. 1983). Males also have higher AOD use rates (Johnston et al. 1989) and are more involved with heroin and cocaine than females (Brower and Anglin 1987; Fors and Rojek 1983). However, rates of involvement are increasing less for males than females (Johnston et al. 1989), indicating the need to focus prevention on both sexes.

Age

Involvement with alcohol and other drugs becomes increasingly likely as children approach adolescence (Johnston et al. 1989, 1987). The major risk in infancy is being born to an addicted mother. In preadolescence, the major risk is the knowledge and attitudes children acquire through models and other sources that may lead them to early experimentation with alcohol or other drugs. For example, use of chewing tobacco among kindergartners (especially boys) was found to be significantly related to knowing someone who used the substance and having seen it used at home (Young and Williamson 1985). However, clinical reports increasingly suggest that children under age 12 whose parents or siblings engage in AOD use do tend to experiment earlier with substances than other young children. National survey data show that the average onset of tobacco use occurs in the 7th grade; alcohol and marijuana use start in the 9th grade and cocaine use in the 12th grade (Johnson et al. 1987).

Segal (1986) contended that, for most adolescents, a stable and predictable pattern of attitudes toward AOD use is present by age 15. Adolescents who go on to experience AOD problems appear to begin experimentation with alcohol and other drugs during the first 2 years of high school (Robins and Przybeck 1985). Onset of use after that time is associated with fewer problems and a greater likelihood that individuals will discontinue use on their own (Kandel 1978, 1982; Kandel et al. 1986).

The literature suggests that adolescent AOD use follows a predictable developmental sequence, such that earlier stages in the sequence predict later stages.

In their gateway model, Kandel et al. (1978) asserted that alcohol use typically precedes marijuana use which, in turn, precedes use of other illicit drugs. Cigarette use may serve as a gateway to marijuana use, which then leads to use of other illicit drugs (Newcomb and Bentler 1986*b*). Yet, despite the rather high prevalence of AOD involvement among youth, only a small percentage of adolescents go on to become abusers (Johnston et al. 1986, 1978). AOD use does not necessarily denote adolescent psychopathology (Baumrind 1985; Jones and Bell-Bolek 1986).

Antisocial Behavior

Antisocial behavior is the most frequently reported childhood antecedent of later AOD use. Childhood antisocial behavior—such as truancy and fighting—has been shown to predict early initiation of AOD use (Wechsler and Thum 1973). Preadolescent antisocial behaviors, such as impatience, impulsivity, and defiant, negative behavior also correlate with early adolescent AOD use (Spivack 1983). Strong relationships between rebelliousness and AOD use have been noted by Hawkins and his colleagues (1985). Childhood histories of conduct disorders, Goodwin (1985) found, are more prevalent among alcoholics than nonalcoholics.

Robins (1978), who also reported a strong association between childhood antisocial behavior and adult AOD abuse, found that the total number of antisocial behaviors was a better predictor of adult outcomes than any family variable. And childhood antisocial behavior predicts frequency of AOD use in adolescence (Johnston 1973; Lerner and Vicary 1984; Simcha-Fagan and Gersten 1986; Spivack 1983).

Kellam et al. (1983) found that children rated by their first grade teachers as being aggressive had higher levels of AOD use 10 years later; this was especially true for boys, and use was particularly likely if aggression in first grade boys was combined with shyness.

A number of studies show that adolescent delinquency and antisocial behaviors precede AOD use. Kandel et al. (1978) found that minor delinquency (e.g., cheating, stealing) predicted initiation of liquor use, whereas major delinquent acts predicted illicit drug use. Antisocial behavior in adolescence has been found to be a more powerful predictor of adult alcoholism (Loeber and Stouthamer-Loeber 1987) than antisocial behavior in childhood (McCord 1981). And juvenile delinquency has been associated with higher lifetime and current prevalence rates of use for all illicit drugs (Johnston et al. 1978).

Learning Disorders and School Problems

Children who display symptoms of attention deficit disorder, hyperactivity, and some specific learning disorders appear to be at increased risk for involvement in and dependence on alcohol and other drugs (e.g., Cruickshank 1977; Silver 1984; Small 1973; Wender et al. 1981). Alcoholics are more likely than nonalcoholics to have had a history of hyperactivity in early childhood (Goodwin 1985).

These findings did not hold for African American youngsters studied longitudinally by Kellam et al. (1983). Kellam reported that learning problems in the first grade predicted teenage psychiatric problems but did not predict teenage AOD use. In fact, higher IQ test scores in the first grade predicted greater beer and wine use in adolescence, and higher school readiness scores predicted marijuana and alcohol use in adolescent boys and girls. The extent to which these findings apply to other ethnic groups is unknown.

In adolescents, poor school performance and a history of academic failure are antecedents of AOD use (Jessor and Jessor 1977; Kandel et al. 1978; Smith and Fogg 1979). Limited intelligence, perceptual deficits, lack of academic motivation, truancy, absenteeism, and early dropout are all prognostic of AOD use (Hawkins et al. 1986; Kumpfer 1988; Smith and Fogg 1979). The precise point in the developmental sequence where school achievement becomes a reliable predictor of AOD problems has yet to be determined.

It does appear that schools in which peer norms condone the use of marijuana and other drugs have higher overall use rates, as well as more use by youth who are otherwise considered well adjusted (Baumrind 1985).

Attitudes and Beliefs About AOD Use

Just as parents' and peers' positive attitudes about AOD use increase the risk of AOD use among children and youth, so, too, do the attitudes and beliefs held by individual youth. Several researchers have found that youths' positive attitudes and beliefs about use precede their decision to use and their initiation of use (Bloom and Greenwald 1984; Kandel 1978; Smith and Fogg 1979). Perceptions that use of less dangerous drugs (e.g., marijuana) does not lead to use of more dangerous ones (e.g., heroin) and that use, per se, does not have serious consequences are also associated with onset of use (Fors and Rojek 1983; Johnson et al. 1986, 1987).

While actual availability of alcohol and other drugs is an important factor in the decision to initiate use, so too are assumed availability and perceptions of the opportunity to use (Miller and Cissin 1980). Users in one study (Blount and Dembo 1984) perceived drugs as being more available, and use as being more widespread, in their neighborhood than did their nonusing peers. Users also perceived drug users as having a higher status that nonusers in the neighborhood.

Other Personality Risk Factors

Several personality characteristics are also predictive of AOD use. These include rebelliousness (Goldstein and Sappington 1977), alienation (Jessor 1976; Jessor and Jessor 1978; Kandel 1982; Smith and Fogg 1979), a strong need for independence (Jessor 1976; Jessor and Jessor 1978), and a high tolerance for deviance (Jessor and Jessor 1977, 1978). Low religiosity is also a predictor of risk for initiation of use (Jessor et al. 1980; Kandel 1982), and a strong negative relationship exists between church attendance and use of drugs like marijuana (Fors and Rojek 1983).

Weak statistical associations and/or contradictory findings have been reported for other personality characteristics and involvement with alcohol or other drugs: low self-esteem and external locus of control (Hawkins et al. 1985; Jurich and Polson 1984); sensation seeking or risk taking (Hawkins et al. 1985; Hobfoll and Segal 1983; Labouvie and McGee 1986; Zuckerman et al. 1972); and depressive mood (Kandel et al. 1986*a*; Newcomb and Bentler 1986*a*; Paton et al. 1977).

Summary

This chapter focuses on strategies for identifying youth at risk for AOD use, particularly those who are most vulnerable and most in need of prevention. Several methods and approaches are suggested for identifying groups of youth known to be at risk or to have one or more risk factors in their lives:

1. Secondary analyses of large-scale data bases:
   - Epidemiological studies
   - National surveys or statewide surveys
   - Special population surveys (e.g., of school students)
2. Secondary analyses of archival and indicator data:
   - AOD-related deaths (vital statistics, coroners)
   - AOD treatment (rehabilitation centers, emergency rooms)
   - Delinquency, Driving While Intoxicated cases, other relevant law enforcement records (e.g., on drug use and trafficking patterns)
   - Health-related risk factors (e.g., teen pregnancy, injuries from gang violence, infants born to addicted mothers)
   - School records related to known risk factors (e.g., poor achievement, truancy, expulsions)
3. Secondary analyses of small-scale research studies on factors that are correlated with risk for AOD use among youth

4. Analyses of data obtained through direct collection:
   - Ethnographic studies
   - Key informant surveys
   - Community forums
   - Surveys of youth
   - Direct psychometric assessments
   - A needs assessment or triangulated approach that uses two or more of the methods outlined above
5. Use of a composite index to enhance reliability and predictive power of data for estimating youth at risk

Risk factors identified in the research literature can serve as useful guides in developing identification strategies, or as identifiers themselves when time or resources prohibit use of secondary data analyses or direct data collection.

Prior to using any identification procedure, planners should develop a framework for identifying and selecting youth targeted for intervention. At a minimum, the framework should:

- Identify specific goal(s) of the intervention
- Specify the target population(s)
- Define the level of AOD use involvement (or lack of involvement) the intervention will be designed to address
- Determine which substance(s) will be targeted by the intervention

In planning and implementing identification and recruitment strategies, programs also need to consider the limitations of current knowledge and methods. The estimation of risk carries with it several risks. Some are methodological; others pertain to the inherent potential for identification to lead to stigmatization and self-fulfilling behavior (i.e., AOD use). Still, if properly conducted, identification procedures can assist in targeting limited resources to those youth most in need of AOD use prevention.

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Notes

1. This social indicator approach, based largely on census data, is complex and may be fairly expensive. For those reasons, it is not presented in detail here. Interested readers may wish to consult the literature (see, e.g., Bell et al. 1982).

2. Some analysts have developed "synthetic analysis" approaches to estimate risks in small area populations using well-designed State (Froland 1979) or national level (Cohen 1970) survey data. To date, these methods remain exploratory.

3. Many of the instruments presented are questionnaires used in specific studies or surveys. The documents contain only a few psychometric tools, most of which measure states thought to be associated with AOD abuse (e.g., sensation seeking, emotional disorders).

4. Test-retest reliability is estimated at .78; Chronbach's alpha is .96; sensitivity was 88 percent and specificity 82 percent, with an overall accuracy of 86 percent. The ADI score correctly classified professionals' treatment recommendations for 72 percent; 12 percent were classified as needing more intense treatment than professionally indicated and 15 percent as needing less intense treatment.

5. Available from the Adolescent Assessment Project, Wilder Research Center, St. Paul, Minnesota.

CHAPTER 3

Reaching and Retaining High Risk Youth and Their Parents in Prevention Programs

Hank Resnik and Marba Wojcicki

One of the first and most difficult tasks facing prevention staff is to reach youth at highest risk for future alcohol and other drug use and their families. Once these youth are reached, program staff face another difficult challenge: motivating them to stay and participate in the program. These are not easy tasks. This chapter highlights what has been learned, so far, about outreach and retention methods and describes strategies that appear to be effective.

Youth at high risk for use of alcohol and other drugs are often caught in a complex web of social disruption and problem behavior. They tend to be alienated from traditional institutions and, thus, difficult to reach through conventional approaches. They are often the first to drop out of school, the first to become involved with the juvenile justice system, and the first to test the challenges of the adult world. Even when high-risk youth do have contact with conventional social service agencies and institutions, their involvement is likely to be tenuous and short lived. Unlike young people who are oriented to academic achievement, they seldom participate in nonacademic school programs, such as athletic activities and social events. When they drop out of school, they are more likely than other youngsters to face hardship and disappointment and less likely to achieve success.

Involving parents of high-risk youth is an even greater challenge. High-risk youth usually have lower levels of parental support than other youngsters, and their parents are less capable of helping them in times of difficulty. Adolescent AOD use has been found to be significantly related to such family factors as the disruption and dissolution of family structure. Many parents of adolescents who use illicit drugs are illicit drug users themselves. AOD-abusing families are often isolated from and rejected by the community because of their preoccupation with these substances and their need to maintain protective boundaries.

Even when parents of high-risk youth are interested in becoming involved in prevention activities, they may have difficulty doing so, especially if they belong to a low-income group. Low-income parents, particularly one-parent families, have difficulty attending and participating in meetings for a variety of reasons including lack of child care, lack of transportation, job requirements (working when meetings are held), suspicion and fear of programs, personal and psychological problems, and language differences. For some families, poverty creates a continuing spiral of deprivation and need and a self-perpetuating underclass.

Another set of barriers to involvement of low-income families is their feelings of hopelessness and powerlessness. Although an intangible factor, such feelings can be pervasive and debilitating. Low employment, dropping out of school, delinquent behavior among increasingly younger peers, and a lack of positive adult role models all contribute to negative, self-defeating attitudes. This does not mean that AOD use is synonymous with low income as it once seemed to be; today, alcohol and other drug use cuts across all social and economic boundaries. It does mean that low-income individuals will probably be the most difficult to reach and to retain in prevention programs.

What can be done? The challenge is formidable. Clearly, new structures and approaches are needed to reach and retain high-risk youth and their parents in prevention programs, along with new ways of delivering prevention and early intervention services. In this chapter, concepts and approaches that hold some promise of being successful are identified. They are based on a review of the literature and the actual experiences of several prevention programs (see resources at end of chapter) that were identified and contacted to obtain information about their outreach and retention strategies.

This chapter discusses community outreach strategies, outreach in natural settings, outreach through programs and institutions, involving families, motivating youth and parents to participate, utilizing role models, and incentives. Six programs are described that illustrate promising outreach and retention strategies.

Community Outreach Strategies

Since high-risk youth and their parents are not likely to seek out prevention and intervention programs until times of crisis, outreach must be among a prevention program's top priorities. While more conventional programs can set up shop and wait for young people and parents to become involved or seek out their services (in schools or community agencies, for example), aggressive outreach and recruitment are needed to reach high-risk populations served by AOD prevention programs. Outreach cannot be considered an add-on; rather, it needs to be a major organizational activity, as carefully planned and implemented as other prevention services.

This contrasts sharply with conventional notions of AOD use prevention. It has become a matter of course, for example, for some organizations to establish cooperative arrangements with schools and make presentations about chemical substances or provide training in resistance skills. In doing so, program staff may reach a broad, general population while missing many high-risk youth entirely.

Effective outreach requires an ability to make contact with high-risk youth in settings where they are comfortable, where they feel least alienated. Community outreach efforts are generally conducted at two different organizational levels:

- Outreach to the community by agencies, organizations, and institutions that provide services to the community
- Outreach through and by the community (e.g., tenants organizations, citizens advisory groups)

Ideally, partnerships will be formed between formal service organizations and community groups to establish and carry on coordinated prevention outreach strategies. More and more, leaders in the prevention field have come to recognize the importance of community groups as a vehicle for outreach efforts and to appreciate what community groups can do to bring about change in attitudes and behaviors. Pentz and her colleagues (1989) are evaluating one of the largest community-based AOD prevention efforts ever attempted in this country. Community organization is a vital component of this promising multicommunity effort.

In planning outreach, the term "community" can be defined in many ways—people who share a common geographic area; people who have a common racial, ethnic, or religious identity; people who share certain beliefs; or an affiliation of people for the purpose of achieving common goals. Most likely, it is a combination of these elements. Outreach can be conducted through communities in numerous ways. Prevention agencies often form advisory groups representative of the community to help develop appropriate outreach strategies. It is not an easy task to form such groups and to maintain their involvement—especially in low-income communities. Outreach is often done through community groups that are already formed, such as church, parent, and school groups. Many agencies develop "focus groups" composed of the types of individuals they are trying to reach in order to obtain feedback about the appropriateness of specific strategies and prevention methods. Focus groups can also be used in preliminary planning to gain a better understanding of target groups, how best to reach them, and how to communicate effectively.

There are a number of reasons for trying to channel prevention outreach efforts through the community. The first and perhaps most important reason is to identify, understand, and mobilize the social forces that influence, or have the potential to influence, the attitudes and behaviors of individuals in high-risk target groups. Social forces can modify perceptions, attitudes, and behaviors of individuals and, through peer/community pressure, can help sustain behavior change over time. Prevention information is more credible and more likely to be understood when communicated through community groups.

To be successful, outreach must be based on a sound theoretical understanding of the sociocultural factors, community norms, and the context within which different subgroups in the community define their norms and values. Studies show that health education programs are more likely to influence people to modify or change attitudes and behaviors when they are reinforced by community and social supports and beliefs and attitudes of reference groups (Nelkin 1987). Youngsters are influenced by the norms and accepted behaviors of the community as well as their reference or peer groups, and they are unlikely to behave in ways that will incur the disapproval of others in their social networks.

Agencies and organizations can also target outreach efforts directly to subgroups within the community that are at high risk of becoming involved in AOD use. A number of outreach models have been developed. Although there is no empirical evidence, as yet, that the programs have been effective in changing high-risk behaviors, there are quantitative and qualitative data showing that these models are successful in reaching large numbers of high-risk youth and in motivating them to participate in program activities. These outreach models generally fall into one of the following categories:

- Outreach to high-risk youngsters and their families in their natural communities
- Outreach through programs and institutions

Certain principles must be followed in using either of these general outreach models. Prior to reaching out to high-risk youth, it is important to assess the community (needs assessment) and learn as much as possible about the youth and their environment. Lorion and his colleagues (chapter 2) review the different approaches that can be used to identify individuals and groups at risk for AOD use and to assess the risk factors associated with such use.

Despite similarities, the attitudes and behaviors of youngsters are likely to vary in different regions of the country; in rural, suburban, and urban settings; in different ethnic communities; and in different socioeconomic groups. Each community has its own unique character that needs to be understood and incorporated into outreach to its members.

In assessing the community, it is also important to identify the social factors that support attitudes and behaviors. Programs that seek to influence or change attitudes and behaviors must inevitably confront the diverse and complex social forces that motivate and shape such behaviors.

Outreach in Natural Settings

How can you reach high-risk youth, especially those who have dropped out of school, do not participate in traditional social, recreational, and school activities, and are prone to engage in illegal activities? How do you reach such youngsters in isolated rural areas, suburban communities, and urban neighborhoods? One approach that has proven effective is to go out into the natural environments where youth tend to congregate, including street corners, playgrounds, schoolyards, shopping malls, and beaches. Many municipalities have established outreach programs to reach gangs and community groups to prevent antisocial behavior. New York City established such outreach programs in the 1950s when gang fighting was prevalent. Today, outreach services are generally provided to adolescent runaways.

Much, in fact, can be learned about outreach approaches and methods from adolescent runaway programs. These programs typically make their first contacts with prospective clients on the street. Although outcome data are not available, process data show that these programs are very successful in reaching youth who are at high risk for AOD use.

The Bridge, located in Boston, was one of the first runaway programs to send counselors into neighborhoods to do "streetwork"—make contact with troubled youth, many of whom have AOD problems. Each year, more than 4,000 youth are served through The Bridge's outreach services, which now include a mobile van staffed by medical volunteers from a nearby hospital. Outreach is conducted constantly. Each day from 3:00 p.m. to 11:00 p.m., five streetworkers cover the areas of Boston where young people hang out, offering services to youth who do not know where to turn for help or who might refuse help from traditional agencies. On the average, each streetworker contacts between 30 and 40 youngsters daily.

Two other examples of outreach to runaways are in Chicago and New York City. The Neon Street Center in Chicago uses outreach workers to reach youngsters on the streets who frequent the taverns and restaurants on the city's north side. The Streetwise Project in New York City has its outreach workers travel throughout the city between 1:00 p.m. and midnight to contact youth who need help.

One of the most successful AOD prevention outreach programs for high-risk youth in their natural environments is the Youth Environment Study (YES) in San Francisco. Evaluation has shown that the program's methods of reaching youngsters in their natural settings are effective (Feldman et al. 1987). Outreach workers use an ethnographic (participant observation) approach to gather information systematically about the community and the young residents. Trained workers obtain firsthand accounts of activities, interests, and behavior patterns by hanging out, observing, and talking to youngsters and their friendship groups. Workers study the social organizations, the formal network systems and forces, and how they influence people in the community. Indigenous community workers are carefully selected and trained to conduct needs assessments, gather information, and make contact with youngsters.

A major premise of YES is the importance of learning how youngsters identify their own problems and how they attempt to address issues and concerns. Based on a clear understanding of the community, the networks in the community, and the social organization, prevention strategies have been developed and implemented. While the specific aim has been to prevent AOD use, the workers do not concentrate exclusively on issues related to drugs. Rather, they recognize that problems of youth tend to be interrelated, and they provide individualized help.

Outreach Through Programs and Institutions

High-risk youth and their families are likely to be involved with a variety of formal and informal groups, service programs, and institutions. In low-income communities especially, parents of young children are often involved with a variety of social service providers. One way to reach these parents—and their children—is to establish credibility with such service organizations. Parents of young children can also be reached through churches, day-care centers, private day-care homes, and health clinics. High-risk youth may also be reached through health facilities, schools, and a variety of other programs and institutions.

In attempting to reach high-risk youth and families, staff of prevention programs must look to all the available resources in the community. These may include neighborhood organizations and clubs, churches, athletic teams, community centers, ethnic and cultural groups, family counseling agencies, shelters for homeless and runaway youth, health care providers, social agencies, job training agencies, and places of employment. Any organization or institution that touches the lives of youth and families can be a valuable resource, and none should be ignored. The closer these institutions are to the community and the more trusted they are, the more helpful they can be.

The implications of this principle for staff of prevention programs are significant. Where in middle-class, mainstream communities a prevention program staff member can focus on effective strategies and program approaches, in high-risk settings the first and most important step may be to develop a "power map" of the entire community, listing and describing the key leaders and most trusted grassroots groups. Community organizing must be added to the list of skills a prevention professional needs. Closely related skills are diplomacy, effective communication, and sensitivity to the local language and culture. In communities where the "establishment" is regarded with distrust and hostility, these skills may be essential for effective community outreach.

Service programs may have as a main focus reaching youth through their services and activities. For example, The Door, a comprehensive program in New York City, demonstrated how to reach high-risk youngsters through activities and services (Shapiro 1987). This agency set up a facility in the target community called "The Center of Alternatives"—a highly visible place where youngsters could go to socialize, participate in activities of interest, and find help and support. The facility, painted and decorated by youngsters, provides an open, warm, and inviting atmosphere. Health, education, counseling, and a variety of other services are provided along with opportunities to gain personal insight and social skills. The emphasis is on encouraging youngsters to have healthy lifestyles, establish future goals, and resist the temptation or pressure from others to use alcohol or other drugs.

The key to attracting high-risk youth to a program is the kind of activities and services that are provided. To be successful, the services must be appealing. Most likely, youngsters will be interested in recreational activities, music and dance, and various forms of arts and crafts. However, one cannot assume that particular social or recreational activities will be of interest to a particular group. Rather, it is always best to make contact with youth in the target group before establishing program activities and services to determine their particular interests and needs and to obtain an understanding of the local youth culture. One way for a program to demonstrate interest, concern, and a desire to be helpful is to be available to youngsters when they are facing a crisis. Crises may be associated with family, school, the criminal justice system, or places of employment. A breakup with a girlfriend or boyfriend may be a serious crisis for some youngsters.

Paradoxically, although high-risk youth are usually the first to drop out of school, the school can be an important part of an organization's outreach efforts. This is particularly true of the primary and upper elementary grades, where even high-risk youth still tend to be in school, though many have begun to tune out.

Patterns that lead to dropping out, experts agree, are well in place by the third grade. Therefore, the earlier a program reaches high-risk elementary and middle school children, the better. Many organizations interested in dropout prevention are turning their focus to increasingly younger age groups and the parents of young children.

Although high-risk youth of middle school age (grades 5-9) may already have entered a cycle of failure and loss of motivation in school, many have not yet made the decision to drop out. Reaching these young people through their schools is still one of the best means available. In addition, preteens and young teenagers are more inclined than older teenagers to look for and become involved in organizations such as Boys and Girls Clubs, Scouts, and other local community resources that capitalize on their energy and enthusiasm for sports and similar activities.

Given the connection between AOD use and antisocial behavior and persistent delinquency (Elliott et al. 1985; Watters et al. 1985), prevention outreach strategies should also be directed to the criminal justice system—the juvenile court, probation officers, and the local police precinct. Innovative methods of reaching delinquent youth have been established in some communities. For example, the Juvenile Probation Intensive Team Resource Program (JUPITER) was established in Middlesex County, New Jersey, to identify and reach high-risk, repetitive, juvenile offenders from urban areas. This program receives referrals directly from the juvenile justice system. In 1989, the New Jersey Division of Narcotic and Drug Abuse Control (the State drug abuse authority) received grant funds to demonstrate the effectiveness of a program to reach the younger siblings (aged 11 to 16) of older youth (aged 17 to 22) who had been arrested. The older youngsters are identified through the department of juvenile probation.

Many prevention programs in high-risk settings offer training for the staff of law enforcement agencies, health care facilities, community organizations, and schools that will be involved with a specific project or that already serve the targeted population. The directors of these programs emphasize that sensitivity to AOD problems and know-how to deal effectively with high-risk groups and individuals must be acquired.

Involving Families

In the last decade, the importance of family involvement in all aspects of prevention programming has become increasingly apparent. The Head Start program, for example, has demonstrated the benefits of involving families and reaching young children before their problems become severe (Gold 1988).

An Institute of Medicine report (1987) on the effects of alcohol called the family the "primary victim" and the "first line of defense for prevention and intervention efforts." Yet, prior studies of prevention programs showed that only a small percentage used family-focused strategies (Hawkins et al. 1985). Fortunately, a strong trend toward family involvement has developed in recent years. A large majority of the demonstration programs funded by OSAP, for example, have family components.

Organizations in high-risk communities have also begun to provide services to the family as a unit, reaching family members of different ages and stages of development. For example:

- At Pittsburgh's PA-The Second Step AOD treatment center, an OSAP grantee, children learn social and communication skills while their parents get medical treatment and meet with parent/child care workers.
- In Columbus, Ohio, as part of Project Linden, an AOD counseling program at a well-established community center, African American children under age 10 are provided with "Fat Albert and Cosby Kids" alcohol prevention comic books and other culturally specific materials. At the same time, adolescents and young adults attend vocational orientation sessions and learn about responsibility, decisionmaking, and self-esteem. A related program involves outreach to women, many of whom are single mothers with AOD problems. This program addresses self-image; drug, physical, and sexual abuse; assertiveness; employment; and parenting.

Outreach and retention techniques are likely to vary according to the particular age group a program is targeting. To reach preschool children, for example, it is often necessary to reach their parents first. Many programs do this by working with parents in the context of comprehensive service agencies, AOD treatment programs, and Head Start. Quite different strategies will be needed to reach high school aged youth or teenagers involved in the juvenile justice system.

Culturally appropriate prevention programming for high-risk populations is being recognized increasingly as a key to effective outreach and involvement. Discrepancy between the cultural orientation of staff and the cultural orientation of the people the program is trying to reach can constitute a serious barrier to involving young people and parents and keeping them involved. Strategies to address this problem range from creating special, culturally appropriate programs and materials to adapting programs and materials for special populations.

The Addison Terrace Learning Center in Pittsburgh, Pennsylvania, for example, uses a number of strategies to assess the culture of the community and incorporate it into program services:

- Developing, training, and supporting a community advisory board to ensure local input from a multicultural perspective

- Gathering information about the culture and lifestyles of the community through a variety of means, both formal and informal
- Identifying essential aspects of the culture of the community that should be taken into account in prevention/intervention programming

Motivating Youth and Their Parents To Participate

Motivation is critically important. Not only must prevention programs determine what will attract young people and their parents, they must also try to keep youngsters involved over time. Both parents and youth must be convinced that prevention programs offer a better way then the negative and self-destructive patterns of the past. Several strategies can be used to motivate youngsters and parents to participate in prevention programs.

One is coercion. Although threats are generally counterproductive, experts agree the right kind of coercion can be effective with some youth. For example, the threat of incarceration or juvenile court often works with young people who are faced with these alternatives versus program involvement. School referrals are often used to persuade teenagers to become involved in AOD prevention and intervention programs as an alternative to suspension.

More often the appropriate drawing card is positive attractions, such as job skills training, recreational activities, arts programs, or a chance to be in an interesting, caring environment. Job training programs are an especially strong attraction for teenagers when presented in a meaningful, relevant way. Programs that help to place teenagers in paying jobs have also been effective in retaining high-risk youth. Theater, recreation, and outings can be powerful motivators. For example, Street Talking Productions for Target Families in Columbia, South Carolina, an OSAP grantee, plans musical productions with casts composed of teenagers. Assisted by an educational television station acting as cosponsor, the program produces and performs shows for families at community centers and other locations around the State. It also features an AOD prevention message through a school curriculum and puppet shows on videotape for younger children in day-care centers.

It is important to remember that basic needs—for food, clothing, or health care—must often be met before parents can turn their attention to AOD problems, either their own or their children's. This is particularly true in low-income areas. Thus, AOD treatment centers, health care agencies, and agencies that offer emergency clothing and food are excellent resources for prevention outreach programs. Often, these agencies are established and trusted community institutions where many kinds of services are available.

They also have staff who can make assessments and refer clients to treatment and therapy programs, when appropriate.

Another approach to motivating parents is to assist them in situations where they have already taken some kind of action regarding AOD use or related problems. Low-income, minority families tend to adhere to family and cultural traditions more than upwardly mobile, assimilated families; in many ways, this is a plus for program organizers and staff. Often the entire extended family and segments of the community will rally to support a troubled family member.

Timing in reaching parents is also important. In contrast to many middle-class communities, parents in low-income neighborhoods are more likely to wait until problems have reached crisis proportions before taking action. Often, they are deterred by fear of reprisals when armed drug dealers are as common a sight as police officers. Or they may lack the skills, knowledge, and resources to take action effectively.

There are a variety of ways to attract the whole family to participate in prevention programs:

- Entertainment—such as puppets for younger children, theater and rock concerts for teenagers, and musicals and inspirational speakers for adults
- Fun—recreation, outings, potluck dinners
- Prizes—ball game tickets, dinners, donations of sports and recreational equipment from local merchants, and cash rewards for completing a program
- Satisfying the need to be with others, to belong and have support—for example, groups set up specifically for women or for children of alcoholics

Utilizing Role Models

Positive role models are key to effective prevention program organizing and outreach; however, they are often scarce in high-risk communities. According to Dr. Flavia Walton, the administrator of Project Lead, an OSAP program in Washington, DC, providing high-risk youth and their parents with positive role models who have "a strong work ethic, not just entertainment or sports figures," is one important way to influence them. "Many single mothers do not go through a normal developmental process," says Walton. "The modeling they have had is negative. They have never seen a parent—any parent—who works. The bottom line is positive role models and experiences that offer realistic alternatives."

Walton, herself, practices the "first trust, then information" approach to reaching high-risk youth and families. She considers the values of the community and identifies leaders of local sororities and fraternities, African American professionals, and ordinary people with strong value systems. One way she recommends for finding such people is to check at a local library for a copy of the *Black Resources Guide*, which lists African Americans in a variety of professional groups.

Given the importance of role modeling to both high-risk youth and their parents, programs need to involve positive role models in a variety of ways. Respected community leaders, most of whom will not have time for intensive, day-to-day involvement, can be asked to make occasional appearances to inspire and inform youth and parents. Residents who have a stake in the community can play an important role in programs. Serving as grassroots workers, they can be trained to become directly involved in outreach and retention activities, offering insight to the program and serving as role models in the community. Trained peers and "natural helpers" are also important.

Project staff can and should be influential role models, especially for youth. The more familiar they are with the community, and the closer they are to the community's culture and values, the more successful they can be in conducting effective outreach. Formal education is not as important as experience, according to Pittsburgh OSAP project director Robert Harrison. He chooses staff who "recognize success in their own lives—it's a 'success modeling' approach to staffing." Walton likes a combination of recovering and degreed people on staff. For her, people who have not demonstrated a strong set of values will not be good models for others. Many prevention programs for high-risk populations employ a combination of people who are either highly trained or who have backgrounds similar to those of the population being served. Some staff members combine both qualities.

Incentives

Given the difficulty of recruiting and retaining high-risk populations, almost anything that has a chance of working ought to be tried at least once. In a middle-class community, the use of material rewards and incentives might be considered offensive, even immoral. This is not necessarily the case in high-risk communities, where material incentives have often made a significant difference in both recruitment and retention efforts.

Effective material incentives can include transportation to and from the program site, meals at the end of program sessions, and gifts and bonuses for completing the program. Some programs have even tried offering incentives to staff members who succeed in recruiting program participants, although this has been a less effective approach than providing incentives directly to participants.

Perhaps most important, the program itself must offer prospective clients something worthwhile. If clients perceive the program as irrelevant to their needs, their lives, or their community, even the most inspired recruitment strategies will fail. All of the principles described in the preceding pages and reflected in the case studies in the next section embody a holistic approach to recruitment and retention. Recruitment and retention are of a piece; to be effective, they must both draw on an understanding of the needs of high-risk youth and parents and a sincere desire to meet clients where they are.

Examples of Promising Prevention Programs

The six AOD prevention programs briefly described below are directed at high-risk youth and their families. They were selected for inclusion here because they represent a cross-section of programs, offer examples of a variety of promising strategies, and have demonstrated a degree of success in reaching and retaining youth and parents. The particular outreach recruitment and retention strategies are highlighted. In addition, the "snapshots" describe the context of the program and offer an overview of the types of services the program or agency provides.

Youth and Family Prevention/Intervention (YFPI) Pittsburgh, Pennsylvania

The recruitment and retention strategies exemplified by YFPI are:

- recruiting from AOD abuse programs;
- networking with schools, business, and local organizations;
- involving the entire family;
- job skills training; and
- culturally appropriate programming.

This OSAP-funded program is housed in two locations: PA-The Second Step, a methadone treatment center founded 20 years ago, and the Addison Terrace Learning Center, located in a public housing project. YFPI's target population is families of children from birth through their teenage years in which either the parents or children are chemically dependent or the children are low achievers or involved in the juvenile justice system, among other risk factors.

"We're incorporating existing situations into new contexts," says program director Robert Harrison. "For example, we already had access to the teen population in the housing project. We also recruit within our large methadone maintenance program through referrals from counselors who work with an adult client, see his or her children, and become concerned about a child's behavior. Another mechanism is Project Team, an intensive program for new clients entering the clinic." Clients of Project Team are at PA 5 hours a day, 5 days a week, and become part of an in-house support group that includes the children of clients, especially during the summer and after school.

OSAP funding has allowed PA to try different methods of reaching and retaining families. A new biweekly "Parents Forum" brings together all PA clients and staff for 90 minutes to talk about parenting or being a head of household. A "Parent Advocate," a trained social worker, helps clients deal with various social service systems in the community (e.g., health, welfare, schools, and courts). The "Short Stop" child care program and an on-site playroom at PA provide places for young children to interact with staff while their parents go elsewhere in the building for treatment. "We're looking for gateways to children," Harrison says. He adds that voluntary activities and those praised by word-of-mouth help to open those gates.

An on-site, income-producing print shop for PA clients and other adults being trained for the Pittsburgh job market is another strong magnet both to parents and teens. A computer skills lab attracts children and adults with games and educational and job-related software.

Many of the PA clients, Harrison says, are not motivated for rehabilitation and still have a street mentality, but they dote on their children even when they lack effective parenting skills. To make the most of this parental involvement and concern, the YFPI staff uses the culturally appropriate, family value-based model of the Right Start program, developed by Jerome Taylor, a consultant to the project based at the University of Pittsburgh. This program component helps parents who do not perceive problems with their young children, as well as families in which older children are experiencing difficulties.

The Right Start approach was developed in conjunction with a mental health program for mainly African American, low-income parents of children from conception to 3 years of age. Parents come to the program through referrals from mental health institutions and hospitals, because of child abuse and neglect, by self-referral, or on the recommendation of former clients. The program has shown great promise by "meeting parents where they are," because parental values are the foundation for Right Start's methods and strategies.

Interviews with parents focusing on long-range goals for their children helped Taylor and his associates develop a list of the most important parent-generated values around which to design and develop the program:

- Love and respect

- Interpersonal skills
- Learning orientation
- Self-confidence
- Self-persistence
- Self-esteem
- Self-reliance

This values-oriented technique has helped significantly to establish parental commitment and involvement. Responses from parents during interviews included comments such as, "Nobody has ever asked me about what I want for my child."

In addition to using the value system of the parents, Right Start calls attention to Biblical role models, cultural heroes, and local adult role models to instill pride, a sense of community, and an appreciation for one's own culture. Taylor has written that appropriate adaptations could be made for any culture. Followup studies show that low- and middle-income African American and white parents, as well as African American and white preschool teachers, endorse the values elicited from parents in the interviews and used as the basis for the program (Taylor in press). According to Taylor, children in the program are helped to understand their environment "culturally, socially, economically, politically, and educationally."

A "Success Modeling" component of YFPI teaches youth to recognize, analyze, and relate to success in their own experience, to set goals, and to plan for success. An important element in this component is the use of mentors recruited from the community with the assistance of organizations such as a local office of the American Society for Training and Development. The mentors help with the Success Modeling component or work with young people one-on-one. "If we have a 16-year-old interested in electrical engineering, we'll try to match him with someone in that field," Harrison says. A match is made only after a young person indicates a special interest.

Elements of the YFPI project are also being introduced into the city schools. Teachers are being trained to implement mentoring programs patterned on the Success Modeling approach. The Positive Impact Program, conducted by staff of the Addison Terrace Learning Center, includes school-based workshops on chemical abuse and teen parenting.

YFPI has also succeeded in tapping a variety of local resources for help. In addition to the city schools and consultant James Taylor and graduate students at the University of Pittsburgh, YFPI has established ties with the Mayor's

Commission on Families; the Chemical People Institute, a network of Western Pennsylvania community-based AOD task forces; a local bank that, in exchange for a seminar on AOD issues for its staff, has provided personnel to do a computer needs assessment; a local coalition of prevention programs; and Pittsburgh Community Television.

Super II Early Intervention Demonstration Program Atlanta, Georgia

The recruitment and retention strategies exemplified by this program are:

- parent peer session;
- location on-site at Boys Clubs and Girls Clubs;
- parent and peer leader training; and
- staff designated for the recruitment/retention role.

Targeting African American inner-city youth 11-17 years old and their parents, the OSAP-funded Super II program is based in the Office for Substance Abuse Prevention of the Metropolitan Atlanta Council on Alcohol and Drugs. The program takes place on-site at eight Boys Clubs and seven Girls Clubs throughout Atlanta. Eighty-five percent of the young people in the program come from single-parent homes. The heart of the program is a series of seven meetings involving both young people and their parents. The meetings focus on family communication, parenting skills, AOD use prevention, peer pressure, and how to say "No" to negative influences.

"All the Boys Clubs and Girls Clubs are located in high-risk areas," says project director Gregg Raduka. "The Girls Clubs were saying initially that they didn't have that many girls using drugs, but our surveys found that AOD use was about the same for the girls as it was for the boys. At first there was a lot of denial."

Nevertheless, the Boys and Girls Clubs are a key to successful recruitment and retention. Young people in the community have gravitated to the clubs since they were established. They are drawn in part by the wide variety of recreational opportunities the clubs offer, but also by youth and recreational workers who are often much more relaxed and informal than teachers, counselors, and other types of youth-serving professionals. In addition, as part of the OSAP grant, Super II has singled out one staff person in each club to be a "Recruiter/Maintainer." These staff members are responsible for reaching out to young people and their parents, making sure they attend Super II meetings, and following up if youth or their parents miss sessions or stop attending. "It's almost a sales and marketing type of job," says Raduka, "one that might make people suspicious. It's more informal and friendly. It's an urban, inner-city approach. We sought out a particular, extroverted type of person at each club for this position. These people are known in their communities."

Since the program focuses on parent-child interactions and family communication, attendance at the program's seven training sessions by a parent, guardian, or significant adult is strongly encouraged. If young people cannot get someone from their families to accompany them, their "significant adult" might be a club staff member.

One aspect of recruitment and retention of program participants tried by Super II is a sliding scale of reimbursement for program staff based on the number of people reached and involved over a period of time. "We're learning that's perhaps not the best way to go," says Raduka. "Paying recruiters by the number of people they recruit doesn't feel too good. We tried it, but now we're looking at alternatives to that mechanism." Raduka thinks that a variety of incentives for the participants themselves are likely to pay off in higher participation and better feelings about the program generally than incentives to the recruiters.

Toward that end, and with the help of a U.S. Senator from the Atlanta area, Super II has begun to approach local corporations, asking them to contribute various rewards and incentives. Fast food companies, for example, have donated meals that are served at the clubs as part of the seven-session program. The clubs advertise in advance that a meal will be part of the session.

Once youth and parents are involved, the seven-session program has had a relatively high retention rate, averaging 15-20 percent. The two groups meet both separately and together. When they meet together, the sessions cover topics such as AODs and the law, family communication skills, the effects of AODs on the body and mind, and community assistance and referrals for help. When they meet separately, the parents discuss techniques and use of discipline, and the teenagers talk about decisionmaking, independent thinking, and ways to earn money as a constructive alternative to AOD involvement. Within the general format, the programs are tailored to the needs of youth and parents at each club.

Only young people previously identified by staff as potentially involved with alcohol or other drugs are recruited for the program. This is done through an assessment based on a questionnaire developed in cooperation with Georgia State University and given to sample groups at each club, as well as the perceptions of club staff.

Initially, problems with how the program was perceived, adult AOD abuse, a lack of transportation, and concern about violent cocaine/crack gangs interfered with parent involvement. Gradually, more parents began to participate in response to a variety of incentives that included transportation, field trips, dinners, and tickets to local basketball games for both parents and teenagers.

The program places a strong emphasis on training all staff and presenters. For example, participating police officers receive 3 hours of training, plus additional observation time, before making presentations on AODs and the law. The staff of the Boys and Girls Clubs who lead the program sessions are trained for 20 hours by consultants from the Metropolitan Atlanta Council on Alcohol and Drugs, two members of the Super II project, and a consultant from the University of Georgia School of Social Work. Training is also provided to several teenagers who serve as peer leaders.

The role of evaluation stands out in this program, from the paper work to the control groups. "Evaluation is incredibly tough to do," Raduka says. "It's hard enough getting parents and peers to come out. Then we ask the control group to go home after making the effort to get them, even offering transportation to them." The control group comes to the first session to take a pretest and the seventh session for the posttest. Special programs offering videos or city tours are arranged to fill the remaining part of two 2-hour control sessions.

All youth involved in the program take a followup AOD use test 3 months after the seventh session to assess the program's impact. Court and school records are also checked as an indirect measure of AOD use for both the control and treatment groups.

The first-year evaluation report found reductions in four of five major categories of AOD-related behavior. These included frequency of use and amount of use, number of modalities of use, AOD-related behavior problems, and media influenceability. "One of the most important things we found," Raduka says, "was significant increases in adolescent-adult communication. We think that has a lot to do with the positive findings regarding drug use."

West Dallas County Centers: Drug Education and Prevention Program (WDCC/DEPP)
Dallas, Texas

Recruitment and retention strategies exemplified by this program are:

- focusing on young people's personal interests;
- job skills training;
- payment of teenagers with Job Partnership Training Act funds;
- academic tutoring; and

- on-site location in community centers in housing projects.

This program for African American and Hispanic youth aged 6-18, housed in seven community centers in a large public housing project, includes drug education classes, an inhalant awareness group, a youth band, drama, academic tutoring, and computer literacy classes. Funded by the Texas Commission on Alcohol and Drug Abuse and the United Way, the program also offers intervention services, including counseling for potential and beginning AOD users; education and information about drugs and prevention; and self-esteem and skill-building as alternatives to AOD use. The program was selected by the National Institute on Drug Abuse as a National Model for Minority Youth.

According to project director Zachary Thompson, the centers try to involve children at an early age. The premise is that the sooner young people learn life skills and the work ethic, the less likely it is that counseling or other help will be needed later on. Recruitment of young people is greatly facilitated by the location of the community centers where the participating youth live. "We have a great advantage," says Thompson. "We're right here. The centers are a magnet for kids."

The centers' programming is inherently appealing to young people, says Thompson, especially the focus on computers. In addition to a staff of skilled youth worker/counselors, DEPP employs a full-time computer specialist. "Computers are a big draw for kids," Thompson says. "We introduce 6- and 7-year-old high-risk youth to computers and what they're all about. Then as teenagers they can graduate to the summer program in which they're currently paid $3.25 an hour from Job Partnership Training Act funds to continue to learn." Throughout, the program places a major emphasis on learning life skills and job skills in preparation for constructive adult careers. During an average year, 300 young people are actively involved at each center.

Assisted by a local businessman who volunteers his time, the participants in the DEPP computer program learn BASIC and business computer application. The computers are also used for tutoring in math, reading, and writing. Four times a year the centers sponsor a youth-oriented computer fair. According to the WDCC *Prevention in Action* newsletter, the prevention program "recognizes the need to provide a solid academic foundation in order to divert antisocial behavior as a result of poor self-esteem and low scholastic achievement."

The program also appeals to a wide variety of other interests among local youth to stimulate motivation and involvement. Among the many offerings are basketball, baseball, dance lessons, arts and crafts, drama classes, and the chance to learn an instrument and join a band. "Whatever kids are interested in, we try to build a group around," Thompson says. "If it's model cars, they learn to read directions and finish the project. The overriding concern is that children be successful in life. We want them to read better, write well, be effective in whatever roles society needs. We're helping these kids compete in the real world, and we're starting them as early as possible." The result, according to Thompson, is that many young people in West Dallas "grow up in our program," remaining involved throughout their teenage years.

Although parent involvement is not a major emphasis, the program has an advisory board made up of parents who live in the projects, and each year parents help plan and carry out an AOD conference. "When you have constructive and positive activities, you're automatically getting parents involved," says Thompson. "The kids do the promoting; they really sell the program. Then if you pull five parents in, they pull in five more. Parents like the opportunity to learn and share, but the kid is the main ingredient." Parents can become involved in the program in one of three main ways: (1) by participating in the centers' various conferences and computer fairs, (2) through recreational outings and picnics sponsored by the centers, and (3) through informal rap sessions for parents and youth run by center staff.

For several years, the WDCC/DEPP conferences on AOD use prevention in racial/ethnic communities have been among the most heavily attended events anywhere in the country. The sixth conference, "Drug Abuse Prevention, Intervention, and AIDS Education: Strategies for Working with African American and Hispanic Youth," was held in February 1988. Topics included inhalant abuse, intervention strategies, school dropout prevention programs, gangs, and the impact of AIDS.

In 1989, the conference had a more local focus and was developed and organized by parents, who recruited and involved other parents as organizers and participants. The theme was "Up With Hope, Down With Dope." The idea for the conference, says Thompson, came from the program's parent advisory committee. "They want to get more parents involved and generate more awareness of how serious the problem is."

Target San Francisco
San Francisco, California

The recruitment and retention strategies exemplified by this program are:

- peer leaders;
- training for medical personnel;
- on-site location in youth-serving agencies linked with health clinics;
- extensive use of media; and
- recreation and other rewarding activities.

Focusing on youth aged 11-17 throughout the city, this OSAP program is based in primary health care clinics coordinated by the San Francisco Community Consortium. The clinic staff works closely with youth-serving agencies in several different high-risk, heavily ethnic neighborhoods. The project's extensive networking efforts are coordinated by the Target San Francisco staff. Each neighborhood-oriented clinic and its program is unique, serving the special needs of its community and often having a particular racial/ethnic orientation.

The clinic in the Haight-Ashbury neighborhood serves primarily an African American population that includes a high percentage of latchkey children. A health educator from the Haight Ashbury Free Medical Clinic works part time at the local Boys and Girls Club to introduce AOD use programming as part of the activities for the participating youth. Here, as in other programs in which Boys and Girls Clubs are involved, the clubs themselves are a strong attraction to local youth. Often, they are the only recreation facility in the community available to high-risk youth.

To promote continued involvement in the program, Target San Francisco has selected four teenagers from the clubs' leadership program to be trained as "peer resource workers." The training focuses on active listening, referral intervention, and building resistance skills in peers and younger children. Club members also learn about AOD use and the effects of specific drugs through contests, rock videos, and skits.

A report on the project notes that the "positive, fun atmosphere . . . supports drug and alcohol-free behavior," along with a change of attitude about AOD use. The impact of the Haight-Ashbury program is sustained through a summer camp, which includes additional activities such as teen theatre.

Another clinic, the Native American Health Center, works closely with the Title IV Indian Education Program in the San Francisco school district to provide positive activities for Native American youth attending summer school and job training. The prevention focus is specifically on alcohol-related problems. This program serves the entire family, not just youth. For example, the program has sponsored a summer conference on alcoholism that featured a puppet show for young children, as well as inspirational Native American speakers for adults, among other presentations. Also, adult children-of-alcoholics groups and older teenagers have been meeting with an alcoholism counselor and discussing the effects of alcoholism on family life.

The diverse constituency of the various clinics provides some insight into different aspects of recruitment and retention among different racial/ethnic groups, notes program director Carroll Johnson. "Recruitment and retention is a big concern in the Native American community," she says. "Indian kids are dispersed through the schools. Among 300 schools, the largest number of

Indians in any one school is five." Initially, the project planned to rely on local Native American resources to assist in recruitment and retention, only to find that when the time came, political turmoil and fragmentation made those resources unreliable. "As a result," says Johnson, "we've been focusing our recruitment efforts more on reaching families through the clinic." In other ways, according to Johnson, the Native American clinic has been highly successful. "The project has helped people confront their own denial," Johnson says. "Many of the staff are recovering alcoholics, and both the staff and the clients are offering a lot of support to each other in their recovery efforts."

The Asian population offers a different kind of challenge. "One issue in the Asian community," says Johnson, "is the level of denial of the drug problem, which is really high. We've had to develop indirect ways of involving youth and parents." Johnson notes that there is often strong resistance in Asian families to young people becoming more independent of the family, which is more acceptable to mainstream Americans. As a result, Asian teenagers are likely to draw together, isolated from adults, and seek an outlet in drugs.

One approach to reaching Asian youth has been through Asian-language media, primarily radio spots. Even here, however, program staff encounter challenges, since they must deal with approximately 20 different languages or dialects. The result is a broad-based approach to recruitment that attempts to involve large numbers of Asians in highly public events. "The program has sponsored health fairs, which have been very well attended," notes Johnson. "The staff go out and leaflet whole neighborhoods."

In Chinatown, one especially effective way of reaching teenagers has been through the Newcomer School for recent immigrants. Here, clinic staff provide teenagers, most of them refugees, with intervention and prevention services at a point where their recent orientation to another culture places them at particularly high risk. Classroom talks by health educators, teen theater, and other prevention programming is presented in cooperation with the school staff.

The Chinatown project also includes the following:

- Heavy use of local media: public service announcements developed in conjunction with Chinatown Youth Services, a radio show, articles in the local paper and Chinese TV guide, and development of a list of media contacts for coverage of major events
- A computer list of teenaged clinic patients for targeted mailing
- Translation and adaptation of prevention literature

Another undertaking of the Chinatown project has been the development of a videotaped documentary about its activities. This is used as a public information tool, to create a permanent record of the project, and to inform other community clinics about successful strategies.

In the heavily Hispanic Mission district, the Mission Neighborhood Health Center has benefited from a high level of parent interest and involvement. "Parents in the Mission are especially concerned about substance abuse," says Johnson. Working closely with the Precita Center, a local youth service organization, the program has developed a series of radio spots in Spanish and has organized a series of three meetings, also conducted in Spanish, that bring together parents, their children, and local experts on AOD abuse to discuss AOD abuse and related problems. This program has also developed a Spanish-language drug awareness videotape.

Getting young people away from a risk-producing environment, at least temporarily, is the focus of the project developed by the San Francisco Medical Center Outpatient Improvement Project clinic, a nearby 4-H Club, and the Omega Boys Club. The clinic is located in a high crack use area, Potrero Hill. Transporting young people from the neighborhood to a small farm several miles away on the outskirts of the city provides healthy, constructive alternatives. These include gardening, fishing, outings, and animal care, all of which help to teach transferable skills and build self-confidence. The teenagers involved in this project show the animals they have raised at local county fairs, where they also staff an AOD abuse prevention booth.

At all Target San Francisco clinics, the staff of doctors, nurse practitioners, nurses, and support people have been sensitized to the problems of AOD use and trained in ways of discussing these problems with teenagers and their families. Referrals are made to culturally appropriate treatment providers when necessary. Although the programs and issues vary from one clinic to another, notes Johnson, health clinics, like the Boys Clubs and Girls Clubs, are an inherently effective recruitment mechanisms. Often, high-risk groups are "already connected with the clinic," says Johnson. "They feel a level of trust with that institution. Before this program, the clinics weren't doing anything about substance abuse prevention as such. Now they've all hired health educators, and they have an opportunity to move out into the community and reach even larger numbers of people than before."

Young Children of Substance Abusers (YCOSA)
Selma, Alabama

The recruitment and retention strategies exemplified by YCOSA are:

- referrals from mental health agencies;
- advertising of services;

- inservice training for teachers, counselors, and case workers;
- incentives for continued participation;
- joint parent-child education;
- cultural adaptation of an existing program;
- focusing on alcohol- or other drug-dependent parents; and
- recruitment incentives for parents.

This OSAP-funded project, administered by Alabama's Department of Mental Health/Mental Retardation, focuses on the Karol Kumpfer and Joseph DeMarsh *Strengthening the Family* (STF) program. Through the STF sessions, which span 14 weeks, the adults, all of whom are recovering alcohol or other drug abusers, receive training in parenting skills while their children learn social skills. No matter how many children are in the family, the program singles out one child between the ages of 6 and 9 for special attention—usually the one who seems to be having the most problems. After the first hour of each session, the parents and children meet together in small groups for family skills training.

Recruitment of participants has been "a major challenge," notes State substance abuse prevention coordinator Giles Vaden. Program staff planned for a first-year population of 6 cohorts of 12 families. In actuality, two cohorts were recruited. "We thought we were having a unique problem," says Vaden, "but then we found out that programs all over the country are having similar experiences."

The program's initial recruitment problems meant going back, if not to the drawing board, at least to the meeting table. According to Vaden, "One issue we recognized is that we have a program developed by whites and administered by a mainly white staff and organization. Even though the trainers are African American, we're seen as the establishment."

Another issue was the program's approach to recruitment. The staff person initially responsible for recruitment was the supervisor of an AOD abuse treatment program, who tended to recruit mainly from a small circle of clients in treatment. Now recruitment is being done by a staff person whose background is in case management. "She was trained as a case worker," says Vaden. "She knows the agencies in town, and she's used to making home visits. In 1 month she's gotten nine referrals from one source. She has a whole different orientation. Instead of focusing on treatment, she thinks in terms of human resource management. She has a car, she visits clients, she helps clients get food stamps and welfare assistance, and she helps with a variety of other services. She has contacts all over town. Wherever she goes, she asks if they can recommend recovering substance abusers for the program."

Although the program is likely to have more success with its recruitment efforts in the future, a variety of incentives used since the beginning are also important in attracting and retaining participants. Incentives paid for by the OSAP grant are used extensively:

- Transportation to and from the 14 sessions
- A meal at the end of each session
- Guest speakers
- Inexpensive rewards for appropriate behaviors in group activities
- More valuable rewards, such as tickets to basketball games, for completing homework
- Payment for submitting data
- Child care for siblings
- A $50 gift certificate for attending all the meetings
- A $25 gift certificate for attending most of the meetings

"These incentives are very important," says Vaden. "Some people wouldn't come if we didn't provide child care. We provide it no matter how many kids they have. Also, we offer transportation—our van picks up and delivers the whole family, if necessary. We also provide meals, and at this economic level, a nutritious meal is a real attraction—it may be the only good meal the family gets that day."

Another approach to recruitment has been inservice training for school teachers, counselors, and case workers, focusing on the benefits of the program and encouraging them to recommend prospective clients.

In Selma, one objective of the YCOSA project has been to develop a culturally specific adaptation of *Strengthening the Family* for African American families. Another is to gather data on 6- to 9-year-olds, and a curriculum component has been designed for that age group. The program was originally designed for a Caucasian population and then used successfully with Native Americans and Hispanics. However, program staff found that extensive changes were necessary for the Selma project, especially simplifying the vocabulary of the three program manuals. A set of revised materials is now available.

Data gathered in an earlier study of the impact of STF indicated that AOD use decreased among older children, aged 9-12, in a group of 6- to 12-year-olds when all three parts of the STF program were used. In addition, according to Karol Kumpfer, codeveloper of STF, "regardless of the parents' dysfunctionality, most parents can be coached and assisted in developing more effective parenting styles that will affect risk factors in their children."

"Somos el Futuro" Project ("We Are the Future")
Quest International, Granville, Ohio

The recruitment and retention strategies exemplified by this program are:

- parent involvement and outreach;
- adaptation of an existing program;
- developing community leadership and partnerships; and
- developing new training models.

Quest International, an Ohio-based nonprofit education organization founded in 1975, has developed several comprehensive school-based AOD prevention programs for grades K-12. All of Quest's programs are multifaceted, involving schools, parents, and community representatives. All include a series of meetings for parents that help them focus on issues of childrearing appropriate to their children's age group. Often, local civic and voluntary organizations, most notably Lions Clubs, are also involved.

In 1984, Quest undertook an extensive review of its program for the middle grades, *Skills for Adolescence,* to make it appropriate for a variety of ethnic groups within the United States, particularly Hispanics. Although the program was intended to meet the needs of diverse racial/ethnic groups from its inception, Quest's "Somos el Futuro" project provided for a detailed analysis of the specific cultural needs of Hispanics and ways in which the program could be adapted to meet those needs. The project was based on the premise that, although a mainstream culture prevails in the United States, the existence of other subcultures, most notably the culture of Hispanics, has important implications for prevention programs.

A key assumption of "Somos el Futuro" was the need not just to serve youth who are normally ignored by mainstream programs but to create lasting changes within the Quest organization. By systematically involving Hispanics and other minority groups as consultants and staff, Quest is creating greater sensitivity to the needs of minority groups and developing increasingly responsive and culturally sensitive programs.

The project began with the formation of a national Hispanic Advisory Committee made up of 17 high-level Hispanic educators, youth experts, community leaders, and prevention specialists. This committee met twice in the fall and winter of 1985 in order to establish a set of common understandings about the needs of Hispanics and ways in which Quest, the committee members, and Hispanic and other ethnic communities could effectively interact.

One product of these meetings was a position paper titled "Celebrating Differences: Approaches to Hispanic Youth Development." The paper reviewed a wide body of research on Hispanic youth and recommended policies and approaches for developing effective programs to meet young Hispanics' unique needs. Another product was a 15-minute videotape explaining strategies needed to make schools more responsive to the needs of multicultural youth.

The next step was an indepth review of the *Skills for Adolescence* program materials in order to incorporate adaptations to make the program more responsive to the culture and background of Hispanics. These adaptations became a permanent part of the program when a revised version was published in the spring of 1988. The project also tested the adaptations in classrooms across the country serving the major U.S. Hispanic groups. During this period, several Hispanics jointed the Quest staff, including two vice presidents.

The changes in the revised *Skills for Adolescence* curriculum consist mainly of background information on important cultural elements and instructions to the teacher on how to modify activity to take cultural differences into account. In addition, the adaptations emphasize ways of appreciating cultural diversity and viewing cultural differences as a positive factor that can enhance the overall experience of the program for all the young participants.

In addition, the series on parent meetings was enhanced by including a variety of suggestions about how to get parents to come to meetings and how to help them feel comfortable in what may be an unfamiliar situation for many. A Hispanic consultant to Quest assisted teachers on-site in devising strategies to conduct meetings with low-income and Hispanic parents.

Adapting the program for Hispanics was closely associated with the need for a Spanish edition. The first translation of the program into standard Spanish was begun in the winter of 1986 and is now available.

An evaluation of the initial phase of "Somos el Futuro" compared experimental and control groups in a variety of Hispanic communities. For the "Somos el Futuro" participants, school attendance increased, grade point averages increased, discipline problems diminished, and self-referrals to counselors increased.

In 1989, the "Somos el Futuro" project was expanded into a community-based training program through an OSAP grant that linked Quest International with National Council of La Raza Centers across the country. In this new phase, "Somos el Futuro" attempts to provide Hispanic nonschool youngsters, parents, and community leaders with skills that will enable them to deal with the predictable demands of adolescence and AOD use in healthy, constructive, and socially beneficial ways.

A key element of this phase was training for the directors and staff of the local centers. "The training emphasized ways of developing local resources," comments Quest project Director Juan Callejas. "It focused on empowerment and leadership. Unlike Quest's usual training, this was for community people exclusively, not teachers. It's a different way of doing prevention"—among other things, outreach to the community and ways of making Quest's program even more culturally relevant. "One of the great advantages of this approach," says Callejas, "is that these were Hispanics talking to Hispanics. They had credibility in the community. Many were parents themselves. They're close to the community because they're part of it."

Summary

The need for more effective strategies to reach, involve, and retain high-risk youth and their families in AOD prevention programs is widely recognized. These youth and families tend to be isolated from many traditional settings and often require program strategies tailored to low-income or particular ethnic groups.

This chapter focuses on describing promising approaches to aggressive outreach, involvement, and retention methods appropriate for high-risk youth and their families, based on the scant literature and on information gathered directly from prevention programs. It is clear from these sources that no single approach is appropriate for every community. Special consideration of the culture, values, social structure, and institutional systems of each target community or group is essential.

Also critical is involvement of the target population in the planning, development, and implementation of prevention programs and the involvement of formal and informal groups and institutions in outreach efforts. Often, outreach is most effective when prevention programs train community workers to work directly in natural settings that youth and their families reside in or frequent. Using positive role models, involving parents, providing incentives for participation, offering needed services or referral for services, and training youth to be peer leaders are among a few of the useful strategies described for enhancing involvement and retention in AOD prevention programs.

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Watters, J.K.; Reinarman, C.; and Fagan, J. Causality, context and contingency relationships between drug abuse and delinquency. *Contemporary Drug Problems* 351–373, 1985.

Resources

Programs Described in Case Studies

"Somos el Futuro"

Contact: Juan Callejas
Quest International
537 Jones Road, P.O. Box 566
Granville, OH 43023–0566
614–587–2800

Super II Early Intervention Demonstration Program

Copies of both the parent and youth training manuals are currently available.

Contact: Gregg Raduka
Metropolitan Atlanta Council on Alcohol and Drugs
2045 Peachtree Road, Suite 215, NE
Atlanta, GA 30309
404–351–1800

Target San Francisco

Contact: Carroll Johnson
San Francisco Community Clinic Consortium
1520 Stockton Street
San Francisco, CA 94133
415–398–6935

West Dallas Community Centers Drug Education and Prevention Program

Contact: Zachary Thompson
Director of Drug Education and Prevention
West Dallas Community Centers
8200 Brookriver Drive, N614
Dallas, TX 75247
214–749–0441

Young Children of Substance Abusers

Contact: Giles Vaden
Department of Mental Health/Mental Retardation
Montgomery, AL 36193–5001
205–271–9243

For photocopies of the newly adapted "Strengthening the Family Program" manual, contact:

Karol Kumpfer
Social Research Institute
130 Social Work Building
Salt Lake City, UT 84112
801–581–4861

Youth and Family Prevention/Intervention

Contact: Robert Harrison
Youth and Family Prevention/Intervention
1425 Beaver Avenue
Pittsburgh, PA 15233
412–322–8415

Other OSAP Projects Mentioned in the Chapter

Project Lead

Contact: Flavia Walton
The LINKS Foundation, Inc.
1200 Massachusetts Avenue, N.W.
Washington, DC 20005
202–842–0123

Street Talking Productions for Targeted Families

Contact: Beverly Hunter
State Health and Human Services Finance Commission
Human Services—Greenville Technical College
P.O. Box 8206
Columbia, SC 29606–5616
803–239–2981

Organizations

Those marked by an asterisk are mentioned in the chapter.

Addison Terrace Learning Center of Pittsburgh, Inc.*

2136 Elmore Square
Pittsburgh, PA 15219
412–642–2081

An adult Focus Group meets once a week for 15 weeks to motivate women to become mentors to other single or teen parents. The center also has incorporated a strong approach to multicultural programming. Addison Terrace is part of the Pittsburgh OSAP project discussed in the case study section.

Association of Junior Leagues, Inc.

660 First Avenue
New York, NY 10016–3241
212–683–1515

Works in collaboration with the March of Dimes to establish a network of adolescent pregnancy prevention programs.

Boy Scouts of America*

1325 Walnut Hill Lane
Irving, TX 75038
214–580–2000

Councils such as the one in New York City are recruiting actively in the inner city.

Children's Defense Fund

122 C Street, N.W.
Washington, DC 20001
202–628–8787

The leading independent, nonprofit organization in the country reporting on and advocating for low-income children and families. CDF offers a wide variety of publications and reports.

Cities in Schools

1023 15th Street, N.W., Suite 600
Washington, DC 20005
202–861–0230

Cities in Schools targets secondary schools in major cities throughout the country with a multifaceted program that includes the following elements: (1) formation of a citywide committee to create partnerships to support the program in a selected school or schools; (2) funding through private/public sector collaboration; (3) formation of a facilitation team; and (4) implementation of a program that revolves around delivering a variety of services to high-risk youth within the actual school setting—education, mental and physical health care, counseling, and so forth.

Family Resource Coalition

230 North Michigan Avenue
Suite 1625
Chicago, IL 60601
312-726-4750

Publishes a bimonthly newsletter with a focus on family-oriented resources. Also operates a national clearinghouse and provides technical assistance, conferences, and information.

Girl Scout Councils*

830 Third Avenue
New York, NY 10022
212-940-7802

Publishes a leader's booklet entitled *Tune Into Well-Being—Say No to Drugs.*

Hispanic Policy Development Project

1001 Connecticut Avenue, N.W., Suite 310
Washington, DC 20036
202-822-8414

A leading resource for research and policy papers on issues pertaining to Hispanics.

Institute on Black Chemical Abuse

2614 Nicollet Avenue
Minneapolis, MN
612-871-7878

A leading proponent of innovative AOD use prevention approaches in minority communities. Some materials are available, including a recently produced videotape.

Institute for Responsive Education

605 Commonwealth Avenue
Boston, MA 02215
617-353-3309

Involved in a collaborative effort with the Boston public schools, Boston University, and Wheelock College to provide technical assistance to two Early Learning Centers. A source of information and publications on many topics. including sensitizing school staff to cultural diversity.

National Coalition of Hispanic Health and Human Service Organizations

1030 15th Street, N.W.
Washington, DC 20005
202-371-2100

Founded in 1974, this is an advocacy organization for professionals working in human service fields, with the primary goals of improving the delivery of services to Hispanics.

National Committee for Citizens in Education

10840 Little Patuxent Parkway, Suite 301
Columbia, MD 21044-3199
301-596-5300

Advocates parent involvement in public schools and operates the National Center for Parents in Dropout Prevention.

National Foundation for the Improvement of Education

1201 16th Street, N.W.
Washington, DC 20036
202-822-7840

Created by the National Education Association to be a source of education-related information, including dropout statistics gathered from several organizations.

National 4-H Council*

Extension Service
U.S. Department of Agriculture
Washington, DC 20250

Contrary to the stereotype of being limited just to the rural heartland, 4-H membership is now dominated by clubs serving children from urban areas. The 4-H "For Teens Only" program emphasizes life skills.

National Hispanic Families Against Drug Abuse

1511 K Street, N.W., Suite 1029
Washington, DC 20005
202-393-5136

With a focus on existing community resources, this nonprofit organization develops prevention program materials specifically for the Hispanic community.

Articles and Books

Childhood and Chemical Abuse: Prevention and Intervention. Griswold-Ezekoye, S.; Kumpfer, K.; and Bukoski, W., eds. New York: Haworth Press, 1986.

An excellent resource on broad alcohol and other drug use prevention topics, including several essays that focus on research pertaining to high-risk families and youth.

Drug Abuse Among Ethnic Minorities. National Institute on Drug Abuse. DHHS Pub. No. (ADM)87–1474. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1987.

Covers alcohol and other drug use issues for American Indian, Asian, Pacific Islander, and Hispanic Americans.

A Guide to Mobilizing Ethnic Minority Communities for Drug Abuse Prevention. National Institute on Drug Abuse. DHHS Pub. No. (ADM)86–1465. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1986.

A step-by-step guide to mobilizing communities based on the experience of Oakland Parents in Action.

Guidebook for Planning Alcohol Prevention Programs with Black Youth. National Institute on Alcohol Abuse and Alcoholism. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1981.

A useful resource for program planning and development.

Focus on the First Sixty Months. National Governor's Association Committee on Human Resources and the Center for Policy Research. Washington, DC: the Association, 1988.

Describes prevention programs in 19 States for children from birth to 5 years. Can be found on microfiche at university libraries or ordered (price: $12.50) from the association:

National Governor's Association
444 North Capitol Street, Suite 250
Washington, DC 20001

Youth at High Risk for Substance Abuse. Brown, B., and Mills, A., eds. National Institute on Drug Abuse. DHHS Pub. No. (ADM)87-1537. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1987.

Papers and panel discussions summarizing major research in the field—an essential document.

CHAPTER 4

Promoting Health Development Through School-Based Prevention: New Approaches

Eric Schaps and Victor Battistich

Alcohol and other drug prevention is likely to be most effective when efforts are begun to promote health development in early and middle childhood—a position supported by various workers in the field of primary prevention and in previous chapters in this volume. School systems provide a setting in which almost all children can be reached in ways that will promote health development and help prevent involvement with alcohol and other drugs and other problem behaviors.

During the past 20 years, American schools have mounted a sizable information and educational effort to prevent AOD use among youth. Although many different school-based approaches have been implemented and evaluated, there is still little scientific evidence that these programs have substantial effects on AOD (other than tobacco) use and related problem behaviors among youth (cf. Hanson 1980; Kinder et al. 1980; Klitzner 1987; Leitenberg 1987; Moskowitz 1987*a*; Polich et al. 1984; Schaps et al. 1981; Wright and Dixon 1977). However, recent theoretical and empirical work in child social development (particularly that related to preschool and elementary education) offers considerable guidance in identifying promising new approaches to primary prevention.

In this chapter, relevant literature is reviewed to identify innovative educational practices that may have widespread and enduring effects on children's psychological and social health, including preventive benefits for children likely to be at risk for mental, emotional, or social problems such as alcohol or other drug use. A major part of the review focuses on four program innovations in primary prevention and promotion of basic psychological or social health among preschool through elementary school-aged children. The description includes the theoretical assumptions and models underlying the four programs, the specific practice used by each, the primary outcomes expected by the programs, and the available evidence of program effectiveness. Finally, the information is summarized and synthesized to develop general conclusions about the potential utility of specific educational practices for primary prevention and to prepare a set of general and specific recommendations about future research and program demonstration activities.

Overview and Rationale for Approach

The general approach followed here is to examine AOD use as only one factor in a class of social problems that may arise because of difficulties in socialization during the course of development. Socialization is defined as the developmental processes through which individuals come to accept important social norms, internalize fundamental cultural values, and acquire the basic knowledge and skills necessary for effective functioning as responsible members of society. AOD use, delinquency, and other social problems are, by definition, behaviors that violate social norms and values and thus indicate that socialization processes have not been effective. Consequently, this analysis focuses on socialization issues related to educational practices, promotion of basic psychological and social health, and prevention of mental, emotional, and social problems.

Children's entry into school marks a major transition in the developmental path toward adulthood and autonomous functioning. Schooling, itself, has a widespread and pervasive influence on children's cognitive, emotional, and social development (Bar-Tal 1978; Minuchin and Shapiro 1983) and, in particular, the school has major responsibilities for the socialization of children. Adaptation to the school environment is thus a milestone in the child's socialization. The degree to which the child is successful in adjusting to this social institution, and in meeting its demands for intellectual, social, and personal development, has major implications for the formation of basic attitudes about self and society and for success in later developmental transitions. In seeking to achieve broad preventive effects, the school also provides an easier way to reach large numbers of young people than through families or other social organizations; schools are, thus, potentially a cost-effective site for prevention activities.

Although much prevention programming has taken place in secondary schools, the focus here is on preschool and elementary school programs. Early schooling experiences are especially important for socialization, since they make the first systematic demands on the child for conformity to the cultural values and social norms that govern relationships with individuals and institutions beyond the immediate family. Children's adaptation to these early demands has important implications for their response to later socialization attempts (Battistich et al. in press).

In addition to primacy of influence, preschools and elementary schools may be optimal sites for preventive interventions for other reasons. The preschool and, to a lesser extent, the elementary school define children's personal and social development as a major educational goal; practices and curricula are designed to promote positive personal and social growth as well as cognitive growth. In contrast, secondary schools are more narrowly focused on intellectual development. In preschools and elementary schools, children's relationships with teachers also are more personal, intimate, and of longer duration than in later schooling; hence, the potential influence of preschool and elementary school teachers on children is likely to be greater than that of secondary school teachers.

Differences in structure and organization also make it easier to systematically implement comprehensive intervention programs focused on psychological and social development in preschools and elementary schools than in secondary schools. These differences include self-contained classrooms for most or all of the school day and the maintenance of these groups for the entire school year; the greater coordination of curricular and educational practices within and across grade levels; the explicit recognition that the personal and social development of students are important educational goals; and the relatively small size of both faculty and student body in preschools and elementary schools. These factors make preschools and elementary schools easier institutions to work with than secondary schools, particularly with respect to introducing and maintaining widespread and coherent changes in practice throughout the school.

Finally, preschools and elementary schools are preferred institutions for *primary* prevention programs since very few children will manifest serious problem behaviors by the end of elementary school. In contrast, by the time they are in secondary school, some proportion of youngsters will already by engaging in serious problem behaviors (e.g., criminal acts, frequent alcohol or other drug use); a larger proportion will be engaging in less serious problem behaviors (e.g., minor delinquency, occasional alcohol or other drug use). Aside from the greater difficulty in eliminating such problems once they have emerged than in preventing their onset, the prevalence of problem behaviors among some segments of the population provides social support for their continuance and introduces social influence processes that increase the likelihood of their emergence among additional segments of the peer group.

Social and Behavioral Problems

It has long been recognized that a variety of problem behaviors tend to cooccur, suggesting that they may have a common etiology (e.g., Jessor and Jessor 1977). The cooccurrence of alcohol and other drug use with antisocial behaviors (including delinquency and criminal behavior) is particularly well established (Elliott et al. 1985; Hawkins et al. 1987; Zucker and Gomberg 1986). Some, though less conclusive, evidence (Kellam et al. 1983; Robins 1966) indicates that these behaviors tend to cooccur with certain mental health problems (e.g., major depressive episodes). Moreover, findings from several longitudinal studies (e.g., Jones 1968, 1971; McCord and McCord 1962; Monnelly et al. 1983; Ricks and Berry 1970; Robins 1978) suggest striking correspondences between the developmental precursors of alcohol and other drug use and those of antisocial behavior. These include, in particular, aggressive behavior, conduct problems in school, poor school performance, and delinquency and, perhaps, shyness, anxiety, depression, and problems in peer relationships.

These correspondences in the developmental antecedents of AOD use and other problem behaviors, and their relatively high degree of cooccurrence in the young population, suggest that it may be possible to propose a tentative etiological model for social problem behaviors. One possible model is proposed later in this chapter.

Several studies suggest that the developmental antecedents of AOD use and delinquency may be observed early in life. Probably because of difficulties in family relationships and parental socialization practices, children who are at risk for AOD use and delinquency in adolescence experience problems in their initial adaptation to school (preschool, early elementary). These problems are manifested in conduct (e.g., aggression, shyness/withdrawal) or emotional problems (e.g., anxiety, depression) (see, e.g., Hawkins and Lishner 1987; Kellam et al. 1982). These socioemotional problems may be exacerbated by the responses of teachers and peers and eventually interfere with the child's mastery of academic tasks, which, in turn, leads to problems in school performance in the mid-to-late elementary grades (Hawkins and Lishner 1987; Spivack 1983; Spivack and Rapsher 1979).

The child's failure to adapt successfully to the social environment of the school, as reflected in persistent academic failure and problems in relationships with teachers and peers, eventually leads to increasing alienation from the school and rejection of its norms, goals, and values. This, in turn, results in increasingly poor school performance in adolescence and often to minor delinquency, antisocial behavior, or increased anxiety/depression and initial AOD use. Finally, the failure to adapt successfully to the school environment and to acquire the knowledge and skills necessary for effective functioning in the larger society decreases the probability of successfully adapting to the demands imposed during the transition to adulthood; this may lead to increasing alienation from conventional society, affiliation with deviant subgroups, major delinquency/criminal behavior or AOD use and, perhaps, psychiatric problems (e.g., major depressive episodes, manic episodes).

Several points about the tentative "idealized" developmental progression outlined above should be kept in mind. First, while later stages strongly imply earlier stages, not all individuals at one stage will progress to later stages. For example, while adolescents who use alcohol or other drugs and engage in serious delinquency usually have manifested conduct problems in childhood, it appears that only 30 to 40 percent of young children with behavior problems will engage in antisocial behavior, delinquency, or AOD use in adolescence (e.g., Loeber and Dishion 1983; Robins 1978). Moveover, little is known now about the discriminating characteristics of those who do or do not progress to more severe maladaptation. The limited data available suggest that positive and supportive relationships with parents and other caregivers, teachers, and peers and a sense of personal efficacy play important roles in reducing the risk that early problems will progress into serious maladjustment in later life (e.g., Werner 1987; Werner and Smith 1982).

Second, not all individuals at risk will manifest all symptoms at a given stage; there is undoubtedly some specificity in etiology related to sex, type of antisocial conduct, and severity of the problem (e.g., Elliott et al. 1985; Kandel et al. 1986; Kellam et al. 1983). Nevertheless, there appear to be enough common elements in etiology for the development of a model that will provide a useful framework for evaluating preventive interventions, as well as a set of working hypotheses for subsequent empirical verification, such as the model proposed later in this chapter (cf. Hawkins et al. 1987).

A Brief Review of School-Based Prevention Programs

Although there have been many school-based AOD prevention programs, there is little evidence that they have been effective.[1] Thus, a truly effective school-based approach to the prevention of alcohol and other drug use and related problems among youth is not yet available. (For comprehensive reviews of school-based prevention programs see, e.g., Hanson 1980; Kinder et al. 1980; Klitzner 1987; Moskowitz 1987*a*; Schaps et al. 1981).

In analyzing previous prevention efforts, three primary areas are of concern: (a) the theoretical models underlying the prevention programs, (b) the operationalization of the underlying theory (translation of the abstract theoretical model into a concrete intervention program), and (c) the actual implementation of the program.

Theoretical Issues

It is generally accepted that AOD use and related social problems are extremely complex phenomena that are determined by interactions among several levels of influence (i.e., characteristics of the individual, the peer group, family, school, community, and the larger society). Yet, most prevention programs either have been based on simplistic theoretical models that attribute primary causal influence to one or two variables (e.g., lack of accurate drug-related knowledge, poor life skills, or early antisocial behavior) or, even worse, have been atheoretical (Durlak 1985; Greenberg and Kusche 1988; Klitzner et al. 1985).

Focusing on one or two individual variables increases the likelihood that the wrong variables will be selected. Low self-esteem, for example, has occupied an important causal role in some theories of drug use, delinquency, and academic failure (e.g., Gold 1978) and has been singled out as a primary focus for several preventive interventions. Self-esteem, however, is more likely to be a concomitant than a cause of problem behavior. Although low self-esteem may play a secondary or reinforcing role in the maintenance of problem behavior, enhancing self-esteem is unlikely, in and of itself, to have a preventive effect. Moreover, to the extent that low self-esteem is caused by the same factors that directly contribute to problem behavior, program effects on self-esteem are unlikely to be maintained. Recent reviews (e.g., Scheirer and Kraut 1979) indicate that programs designed to increase school achievement or prevent delinquency by enhancing children's self-esteem tended to be ineffective. Moveover, where positive effects on self-esteem and achievement were observed, the temporal sequence indicated that enhanced self-esteem was not a cause of achievement but rather an effect of improved school performance (see Holly 1987).

Even where important direct influences on problem behavior are identified, however, approaches that focus on single risk factors cannot hope to be effective when problem behaviors are multiply determined. Even among high-risk groups, the complex interaction among several influences determines the occurrence of problem behaviors (cf. Goodstadt 1986; Huba et al. 1980). A substantial proportion of individuals at risk for problem behaviors by any one criterion do not progress to the point where they actually manifest the problem. Conversely, particularly strong influences at one level may lead to the occurrence of problem behaviors among individuals who are at low risk by other criteria.

A related problem is that most prevention approaches have been based on a model that places primary causal significance upon characteristics of the individual (e.g., low self-esteem, inadequate coping or life skills, poor resistance to undesirable peer influences), while characteristics of the surrounding milieu have been largely ignored (Klitzner 1987). For example, despite the fact that schools have been the primary sites of prevention programs, relatively little attention has been paid to the influence of general characteristics of the school (e.g., organizational structure, school policies, classroom practices, school climate) on the rates of problem behaviors among students.[2] Yet, we are dealing with *social* problems—behaviors that result from complex interactions between individuals and their social environment.

In this regard, one can suggest that the apparent effectiveness of recent approaches to smoking prevention may lie in changes in the social milieu, rather than changes within individuals (Moskowitz 1983, 1987*a*). That is, (a) the current social climate is clearly antismoking, and this attitude is shared by most students who participate in the programs, and (b) the interventions are delivered to all students at a given grade level, which should help ensure that peer group norms are consistent with the antismoking attitudes of individuals and the larger society. It should also be noted that programs typically are delivered to early adolescents—an age group with very few smokers. Thus, these antismoking interventions are probably bolstering preexisting attitudes, rather than changing attitudes. For use of alcohol and other drugs, there is less social consensus about abstinence and more social influences supporting use (e.g., the media, use by adults, and use by peers and cultural/subcultural role models such as athletes and musicians).

Operationalization of Theoretical Models

Another problem with previous prevention programs is that the underlying theoretical models were often poorly operationalized when they were translated into specific program practices. Frequently, theoretical constructs were incorrectly or too narrowly defined. For example, it has long been known that peer influences play an important role in the occurrence of problem behaviors, and many programs have attempted to prevent AOD use and other problem behaviors by altering peer group norms. However, rather than attempting to directly influence characteristics of the peer group (e.g., by working with groups of students to promote positive interaction, cooperative interdependence, and the formation of prosocial norms), many intervention programs have either relied on media campaigns to influence perceived norms (e.g., by exposing students to attractive peer models who do not use drugs or engage in delinquent acts; see, e.g., Evans et al. 1981) or attempted to build a resistance to peer influences (e.g., "Just Say No"; see, e.g., Adams et al. 1985). Programs may be more effective if they directly attempt to create positive social influences rather than trying to change individuals' attitudes, skills, or behaviors in ways that may help them resist negative social influences (cf. Moskowitz 1987*a*).

Another problem is that program elements are often limited in scope or duration (Kirschenbaum and Ordman 1984; Klitzner 1987). For example, attempts at helping students become more socially competent are often translated into programs that (a) focus on quite specific and tangential skills (e.g., the ability to think of several alternative courses of action when confronted with a social problem) rather than a comprehensive and systematic set of interrelated skills, (b) rely exclusively on direct instruction or role-playing to build skills, rather than including practice at implementing acquired skills in actual situations, or (c) provide the intervention within a very limited timespan (e.g., 1 or 2 hours a week for 3 to 5 weeks) with little or no followup, rather than providing the intervention over a sufficient timespan to allow progressive skill-building, extensive and extended practice, and systematic feedback and evaluation (cf. Greenberg and Kusche 1988).

In addition to being limited in scope, many prevention programs are add-on, disparate elements in students' school experiences, rather than integral parts of the curriculum (Devlin 1983; Elias and Clabby 1984*b*). For example, rather than systematically incorporating drug education into all applicable parts of the curriculum, where the issues raised are repeatedly returned to and approached from many perspectives, students have, at best, a drug education class once a week for one or two semesters. Under such conditions, the intervention is isolated from students' general learning experiences and thus has little chance of producing widespread and enduring effects (Greenberg and Kusche 1988; Rolf 1985).

Implementation

Many (perhaps most) prevention programs are inadequately implemented (Blakely et al. 1984; Klitzner et al. 1982; Moskowitz et al. 1982; Wittman 1982). Implementors often receive insufficient initial training in how to carry out the program or do not receive enough followup and feedback to attain an adequate level of proficiency (Klitzner et al. 1985). Hence, the overall quality of implementation is often poor. Moreover, despite the fact that conducting an adequate program is known to be difficult, many intervention programs have not assessed the degree or quality of their implementation efforts (Judd and Kenny 1981; Scheirer and Rezmovic 1982).

Many prevention programs are not implemented early enough to prevent the occurrence of problem behaviors. By the time students are exposed to the intervention, many have already formed basic attitudes or experienced negative events that lead to problem behaviors; others have already begun to engage in problem behaviors, especially in AOD use. Such programs are remedial, rather than preventive (i.e., are secondary rather than primary prevention programs); as such, they are less likely to be effective, since it is harder to change established attitudes and behavior patterns than to prevent their initial formation.

Summary and Conclusions

Several general conclusions can be derived from the above critique. First, prevention programs need to begin early (i.e., in preschool or elementary school), to be broad in scope, and to have a deep, pervasive impact on children. To be maximally effective, programs need to begin early enough in the socialization process to provide positive influences on development (i.e., prevent the occurrence of root causes), rather than waiting to provide remedial treatment for individuals who are manifesting antecedent behaviors that place them at risk for serious problems.

Second, theoretical models need to reflect more adequately the complex, multidetermined, and probabilistic nature of the processes involved in acquiring and maintaining problem behaviors. Implicit in this perspective is the recognition that social problems result from a *developmental process* of successive adaptations (or maladaptations) to the social environment. Programs need to attend to the characteristics of the individual as well as to social/institutional influences, and they need to focus on underlying root causes rather than secondary, contributory factors.

Third, programs should be comprehensive, and program elements must be theoretically coherent and operationally consistent. The program should systematically provide a set of consistent, *mutually reinforcing positive influences* that affect several levels of contributory factors (e.g., individual, peer group, and larger social community). In other words, prevention programs should attempt to create and maintain a positive social climate that facilitates socialization, rather than attempt to compensate for a prevailing negative social climate. This argues further that prevention programs should be a natural and important part of the school curriculum and, hence, be reflected in the overall organization, practices, and climate of the school. Under this conceptualization, the term "prevention program" would be inappropriate. The program would disappear as a separate entity; it would be seen by both faculty and students as an integral, inseparable part of the school. In short, promotion of positive personal and social development must be recognized as a primary goal of the school (along with acquisition of academic skills and intellectual growth).

Ideally, prevention programs also should be widespread: they should be implemented routinely in classrooms at all grade levels, include schoolwide elements, and be extended in time. In this way, students would receive repeated, consistently reinforcing experiences as they progress through the grades.

A Review of Selected School-Based Programs

Comprehensive school-based approaches to promoting healthy psychological and social development have rarely been attempted and less often evaluated. Thus, their efficacy for AOD use prevention remains largely unexplored. In this section, four innovative school-based programs are examined in some detail. Although the programs differ in many respects, each exemplifies an effort to promote healthy development. Each is based on a careful and systematic approach to intervention and evaluation that is essential to effective prevention programming, and each has shown either clear preventive benefits or, at least, positive effects on variables related to risk for social problems. Focusing on these programs illustrates the promise of such approaches for primary prevention and identifies the common elements in theoretical orientation and program practice that may account for their observed positive effects.

The primary criterion for selecting programs for review was consistency with the principles outlined in the preceding section. Specifically, programs had to (a) begin early enough to qualify as primary prevention programs (i.e., preschool or elementary school), (b) reflect a concern with multiple determinants of social problem behaviors (e.g., individual, peer group, and social/institutional), (c) use a number of theoretically consistent program practices, (d) be integrated within the larger context of school organizational structure and classroom practices (i.e., not be add-on elements) and a part of the regular curriculum for all students, (e) be provided to students for a sufficient duration to have preventive effects (i.e., 1 year as an absolute minimum), (f) monitor implementation to ensure quality program delivery, and (g) conduct research to assess program effects.

The Perry Preschool Project

The Perry Preschool Project (PPP) is a longitudinal intervention study conducted by the High/Scope Educational Research Foundation of Ypsilanti, Michigan. The experimental study was designed to determine if a high-quality, organized preschool program focused on intellectual and social development could prevent academic failure and delinquency among a high-risk group of poor African American children. A total of 123 children in five successive birth cohorts are participating in this study.

The program began with a group of 28 4-year-olds and 17 3-year-olds in 1962 and followed in each of the next 3 years with additional groups of 3-year-olds. Children were randomly assigned to preschool and no-preschool conditions. The sample of 4-year-olds (n=13) received a single year of the preschool program; all other groups (n=45) participated for 2 years. The study participants have been followed longitudinally through elementary and secondary school; almost all can still be followed up for the study. The latest age for which outcome data are now available for the entire sample is 19; a final wave of assessments will be completed when the subjects are aged 26.

Theoretical Model

The general theoretical prevention model underlying PPP is the social bonding theory of delinquency (Elliott et al. 1979, 1985; Hirschi 1969). The more specific causal model proposed for the intervention's effects has evolved somewhat over the years as study participants have matured; however, the principal factor relating school experiences to delinquency is school failure (Schweinhart and Weikart 1980; Berrueta-Clement et al. 1984). More specifically, the adverse conditions of poverty are seen as having deleterious effects on the child's ability to perform successfully in school. Poor scholastic performance during the early school years leads to lower expectations for future performance on the part of both teachers and the child, resulting in lower scholastic placement in school, a decreased commitment to schooling, and poor academic achievement. These, in turn, lead to school failure and delinquency.

The preschool intervention is seen as preventing school failure and delinquency by increasing the child's intellectual performance during the preschool and early elementary school years and thus enhancing chances for successful school performance. Early school success provides the child with a sense of academic competence and results in higher expectations for performance on the part of teachers, parents, and the child, leading to higher scholastic placement. It also increases the child's commitment to schooling. These two factors, commitment to schooling and scholastic placement, lead to enhanced academic achievement and represent strong social bonds between the child and the school, which serve to increase scholastic attainment (i.e., keep the child in school longer) and decrease delinquency. Finally, the individuals' bonds to the conventional social institution—the school—and their scholastic attainment increase the probability that they will successfully adapt to the demands imposed by the transition to adulthood and will eventually occupy responsible and productive roles in the community (Berrueta-Clement et al. 1984).

Program Practices

The preschool program, known as the Cognitively Oriented Preschool Curriculum (Weikart et al. 1971), is generally derived from the cognitive-developmental theory of Jean Piaget (Piaget and Inhelder 1969).

The program has varied somewhat from year to year, generally evolving from a highly structured cognitive program toward a more child-initiated, discovery-learning orientation designed to foster both cognitive and social development (Hohmann et al. 1979).

The program is based on active learning through interacting with objects. The curriculum content is defined in terms of general developmental goals and strategies for achieving them rather than specific classroom materials or activities. It is organized around a large number of key experiences that serve to enrich and extend children's abilities to use language, represent experiences and ideas, reason logically, and understand space and time. Key experiences include expressing one's feelings in words, relating pictures or models to actual places and things, noticing and describing similarities and differences, comparing and arranging objects according to their attributes, observing and describing things from different spatial perspectives, and planning and completing activities. Such experiences are interrelated and integrated into particular learning activities. Each experience can be realized through a large number of specific activities and at various developmental levels. Over the course of the year, activities are sequenced so children's experiences with objects are extended and elaborated through language and nonverbal (symbolic) representation. Activities move from the concrete to the abstract, from simple to complex experiences, and from the immediate to the remote in time and space.

The teacher's primary role is to promote and support children's self-initiated activity by creating and maintaining a comfortable and secure environment, providing and organizing materials for the children's use, and helping children exercise choice and make decisions, solve problems, and do things for themselves. The classroom is divided into several well-defined work areas (e.g., block play, art, house play, a quiet area for reading and telling stories); materials are clearly labeled and logically organized. This arrangement is intended to provide a stimulating but ordered environment in which children have clear choices and can act independently. The teacher also establishes a consistent daily routine to help children explore possibilities, plan and carry out activities, and make decisions about their learning; time is provided for many types of interaction (e.g., small and large group, child-child, adult-child) and for work in a variety of settings (e.g., indoors, outdoors, in various work areas). The daily routine consists of the following major elements:

1. *Planning time.* The children decide what they are going to do during work time, and they tell their plans to the teacher. The teacher helps the children think through their plans, records the plans for them, and helps them get started.

2. *Work time.* The children carry out the projects and activities they have planned. The teacher helps them accomplish and extend their ideas.

3. *Cleanup time.* The children store their unfinished projects and help sort, order, and put away the materials they have used.

4. *Recall, snack, and small-group time.* Small groups of three to five children meet with a teacher to review what they have done during work time and relate their projects and experiences to one another. This recall period is often combined with a snack. Afterward, the children work with materials in small groups on an activity designed by the teacher to allow observation and assessment of the children's key experiences.

5. *Outside time.* The children and teachers participate in vigorous physical activities outdoors.

6. *Circle time.* All children and teachers meet together to sing, play games, and do similar large group activities.

These elements may be arranged in various ways and combined with other elements (e.g., meals, naps), provided the *planning, work time, cleanup,* and *recall* periods follow one another, with *work time* being the longest single period. These four periods comprise a sequence of "plan-do-review" that forms the essential core of the daily routine and provides children a framework and process for exploring, designing, and carrying out self-initiated learning plans. The teachers set and maintain clear limits on the children's behavior, but otherwise avoid imposing on their activities. Instead, the teachers support children's self-directed actions by joining them in their work and providing praise and affection; they also help them examine and elaborate upon their experiences by conversing with them about their activities and helping them share experiences with one another. In short, the program attempts to provide children with the structure, guidance, and support they need to explore and master the environment and develop a sense of autonomy and competence.

Training and Program Delivery

The program staff were highly competent, well-trained professionals who received extensive training in the program and intensive supervision during the intervention. The classroom program was delivered for 2½ hours a day, 5 days a week, from October through May, with a staff/child ratio of 1:5-7. Teachers also visited the children and their mothers at home for 1½ hours each week to discuss the child's progress, learn about the parents' educational concerns, and work with parents to plan and conduct home activities that would support and extend the classroom program (Weikart et al. 1970).

Target Population

The children were drawn from a neighborhood of primarily low-income African American families on the south side of Ypsilanti, Michigan. Their families were of low socioeconomic status (SES) as determined by parental education, employment, and the ratio of rooms to persons in the household. Children had IQs between 60 and 90 (Stanford-Binet) and no evidence of organic handicap. Fewer than 20 percent of the parents had completed high school, and almost half of the children were from single-parent families (Schweinhart and Weikart 1980).

Quality of Implementation

Although no formal data on implementation are available, there is little doubt that the program has been well implemented, given the extensive training and ongoing supervision of the classroom staff and the small number of teachers involved each year.

Program Effects

The study utilized a true experimental design with random assignment of children to conditions; equivalence of the two groups with respect to male/female ratio, IQ, and demographic characteristics was established at project entry, and there has been minimal attrition from the study (all but two participants were assessed at age 19). The design, thus, permits considerable confidence that observed differences between groups are attributable to the preschool program. Extensive outcome data through age 19 are currently available (Berrueta-Clement et al. 1984; Schweinhart and Weikart 1980; Weikart et al. 1978*a*, 1978*b*; Weikart et al. 1970).

The most immediate effect of the program was an increase in IQ, which persisted through the first grade. There were no IQ differences between program and comparison children from second grade on. However, the program children in the early elementary grades were rated by the teachers as having greater academic potential and motivation than comparison children and had higher scores on standardized achievement tests and better grades through elementary and high school. The program children also were less often placed in special education classes and, when placed, spent fewer years in special education than comparison children. Thus, the program was clearly effective in improving scholastic performance.

The program also increased the children's commitment to schooling and their actual educational attainment. Program children were absent less often than comparison children in elementary school, and from age 15 on they expressed a greater liking for school, reported spending more time on homework, saw themselves as having greater academic ability, and had higher educational aspirations. More important, program children were more likely to graduate from high school and to enroll in additional education or vocational training after high school.

The program also appears to have enhanced participants' economic success. At age 29, members of the program group had higher levels of employment and were more economically independent (i.e., fewer were on welfare and other sources of support); they also reported higher earnings, larger savings, and greater job satisfaction than the comparison group.

Finally, with respect to social problem behaviors, program participants engaged in less misconduct and antisocial behavior in elementary and middle school (through age 15); at age 19, they reported fewer delinquent and criminal activities (although not significantly less AOD use), and had fewer arrests and contacts with the criminal justice system than the comparison groups.[3]

Current Status

In the past decade, the High/Scope preschool curriculum has been disseminated for use with children of all socioeconomic groups and ability levels. Research on program effects among the original PPP intervention sample is ongoing and is scheduled to conclude with a final assessment of the study participants at age 26.

The Child Development Project

The Child Development Project (CDP) is a longitudinal intervention study being conducted by the Developmental Studies Center of San Ramon, California (Brown and Solomon 1983; Solomon et al. 1985). The study was designed to determine whether a comprehensive classroom program, with supportive schoolwide and family activities, could promote children's prosocial development—that is, social attitudes, motives, and behaviors that reflect a sincere concern for the rights and needs of others as well as the self, the knowledge and skills necessary for mutually beneficial and productive relationships with others, and a personal commitment to fundamental democratic values.

The program has been delivered to a longitudinal cohort of children that began kindergarten at three elementary schools in fall 1982 and is currently in seventh grade. A cohort of children from three other schools in the same school district serves as a comparison group. The study is based on a quasi-experimental design in which the six schools were formed into two groups (matched on size, student achievement, family socioeconomic status, and teacher interest in the program). Groups were then randomly assigned to program or comparison status.

The initial sample at kindergarten consisted of 342 children (191 in the program schools). Yearly assessments of implementation and outcome variables have been conducted, and children have been added to the samples as they entered the project schools. Over 1,200 children have been assessed to date. Cohort children at two of the program schools received the program intervention for 5 years (kindergarten through fourth grade), while those in the third program school received it for 7 years (kindergarten through sixth grade). Yearly assessments of the cohort children are planned through eighth grade.

Theoretical Model

CDP is based on a theoretical model that integrates elements of traditional, authority-based models of socialization with those of more peer-oriented, cognitive-developmental theories of social and moral development (Battistich et al. in press; Watson et al. 1989). The model assumes that children have two basic motivational tendencies: one involves individualistic needs for personal achievement and self-determination; the other involves needs for establishing positive relationships with others and participating productively in social groups (cf. Bakan 1966). Effective socialization practices help children to balance or blend these two sometimes conflicting tendencies (cf. Perloff 1987; Spence 1985; Waterman 1981).

Consistent with cognitive-developmental theory, children are viewed as actively striving to understand their social world and construct a personal moral system based on their social experiences. However, since young children frequently lack the skill, knowledge, or self-control to integrate egoistic and prosocial concerns on their own, parents, teachers, and other adults responsible for socialization must help them develop appropriate interpersonal behaviors and experience positive and productive social relationships. This is accomplished directly by communicating social and moral values and enforcing societal norms, and indirectly by controlling the conditions under which children interact (Radke-Yarrow et al. 1983).

Although the CDP emphasis on the importance of adult control is consistent with traditional models of socialization, unlike these models, the aim of adult control in CDP is not simply to gain conformity to social norms or to install a unilateral respect for authority based on fear of sanctions, but rather to develop in children self-control and a personal commitment to prosocial norms and democratic principles of social organization. For this to occur, children must come to understand and accept the importance of prosocial values for mutually beneficial social relationships through their personal experience; they must directly experience warm and supportive social relationships, work together with others toward common goals, and struggle to resolve conflicts and social problems in a manner that is fair to all.

Adult control, guidance, and support are critical in maintaining an environment in which these will occur. Socialization is most likely to be effective when adult control is exercised in the context of a caring and supportive adult-child relationship—one that is combined with clear communication of prosocial values and the provision of guidance and support as children strive to understand the social world, develop self-control and a sense of their own competence and mastery, and form positive relationships with their peers.

Program Practices

The CDP program attempts to promote prosocial development by providing children with several types of experience that will engender a sense of community and a climate of mutual respect and concern in the classroom and school. This is accomplished by establishing a caring classroom environment in which children are given numerous opportunities to learn about others' needs, feelings, and perspectives; collaborate with one another and engage in a variety of prosocial actions; discuss and reflect upon their social experiences as they relate to values of fairness, kindness, and social responsibility; and exercise autonomy and participate in decisionmaking about their activities and classrooms (Battistich et al. in press; Watson et al. 1989). More specifically, the program may be described in terms of five mutually consistent and supportive elements derived from the theoretical and empirical literature on the development of prosocial behavior:

1. *Cooperative activities*, in which small groups of children work together toward common goals on academic and nonacademic tasks; are explicitly encouraged to strive for fairness, consideration, and social responsibility; are trained in relevant group interaction skills; and are provided with opportunities to reflect upon how these values and skills are applied in social relations through presession and postsession discussions of group processes.

2. *Developmental discipline*, an approach to classroom management that promotes the internalization of prosocial norms and values and the development of self-control by building positive interpersonal relationships within the classroom, involving children in class rule-setting and decisionmaking; emphasizing understanding of the principles that underlie rules; and using nonpunitive control techniques that center around induction, mutual problem-solving (as opposed to externally imposed rewards and punishments), and use of minimal pressure to gain compliance.

3. *Activities promoting social understanding*, in which class meetings, discussions of books and films, and events that arise spontaneously in class (e.g., interpersonal conflicts, visitors from other cultures) are used to enhance sensitivity to and understanding of the feelings, needs, and perspectives of others.

4. *Highlighting prosocial values*, in which teachers help children focus on prosocial values and understand their expression in everyday life by pointing out and discussing exemplary behavior in the classroom and in literature, films, and television.

5. *Helping activities*, in which children are encouraged to help others by doing classroom chores, assisting other students in class, participating in peer tutoring and buddies programs, performing charitable community activities, and helping in activities in the school at large.

Training and Program Delivery

Teachers receive extensive training and supervision in implementing the program. Although specific training practices have changed some over time, training has generally begun with a week-long summer session, followed by frequent coaching during the school year. Teachers are observed in their classrooms by program staff, receive systematic feedback, and work together with the coach to improve classroom practices. During the early project years, most teachers received only a single year of training. More recently, teachers have received 2 successive years of training.

Target Population

The program and comparison schools are located in a suburban community in the San Francisco Bay area. The study population is primarily from middle to upper middle SES white families; children in all six project schools regularly score in the top 10 percent of California elementary school students on standardized achievement tests.

Quality of Implementation

Program implementation has been assessed through classroom observation and questionnaires administered to teachers and students. The most thorough and objective assessments have come from repeated visits to program and comparison classrooms by observers who were blind to the intervention and completed approximately 16 hours of observation in each classroom each year. Measures of program implementation derived from these observations have consistently yielded higher scores for the program than the comparison classrooms on each of the five program components. When these data are combined across the first 5 years (kindergarten through fourth grade), scores are significantly higher for each component for the program than the comparison classrooms, and there is a substantial effect size of .44 for a measure of overall program implementation (Solomon et al. 1988).

Self-report data from program and comparison teachers have generally corroborated classroom observational findings. Of greater importance is the salience of differences in classroom environment among the student groups. In open-ended interviews about classroom activities and practices administered in third grade, program students were more likely than comparison students to mention the teacher's stressing of prosocial values, to say that they participated in the development of class rules and would be involved in any decision to change a rule, to state that discussion with the teacher or reparation would occur when a student broke a rule, and to mention "learning to be cooperative" and "learning to understand and appreciate others" as explicit goals of working together with other students (Solomon et al. 1988). Program children also reported greater autonomy and participation in decisionmaking and perceived the classroom as a more caring and supportive social environment than comparison children in the fourth through sixth grades.

Although these group findings indicate that program teachers have implemented the program to a substantial degree, it is important to note that implementation among program teachers has varied considerably, and that some comparison teachers occasionally have received higher implementation scores than some program teachers.

Program Effects

An extensive cross-sectional assessment of a large random sample of students at all six schools in the year prior to program start showed no large or consistent differences between students at program and comparison schools on numerous measures of social attitudes, values, skills, and behaviors. Analyses of the yearly program outcome assessments are now available for kindergarten through sixth grade. The data show a number of weak findings (generally favoring program children) but also several strong and consistent differences between groups.

Classroom observational data have consistently indicated that students in program classrooms engage in more spontaneous prosocial behavior (i.e., helpfulness, cooperation, concern for others' needs and feelings, giving of affection, support, and encouragement) than students in the comparison classrooms (Solomon et al. 1988). Moreover, these differences remain statistically significant when both teachers' general competence and students' participation in cooperative activities are controlled, suggesting that program students' prosocial behavior toward one another is not due simply to differences in teacher-initiated cooperative interactions or to generally better organized and more efficiently managed classrooms.

Beginning in first grade, interview measures of conflict resolution and social problem-solving skills have consistently shown that program children, compared to comparison children, demonstrate greater skill at understanding the perspectives of others, are more likely to consider the other person's needs as well as their own in problem situations, are more likely to consider the consequences of their actions and anticipate obstacles to effective resolution, and select more prosocial and cooperative strategies (e.g., discussing the problem, explaining their position, sharing or other compromise solutions). Although these differences are derived from responses to hypothetical situations, other analyses have shown that the interview responses are correlated with teacher ratings of social competence and prosocial behavior and with sociometric indices of peer acceptance (Battistich et al. 1989).

Several other findings indicate that program children are more accepted by their peers and are generally more socially competent that comparison children. Program children had more friends among their classmates than comparison children on sociometric assessments at fifth grade, and at sixth grade were both more likely to report that they were well liked by their classmates and had many friends at school and to score significantly lower than comparison children on a measure of loneliness. Questionnaire measures at sixth grade also indicated that program children found it easier to work together with their classmates, get along with others, and make friends at school; and that they were less likely to be beset by problems of shyness and social anxiety than comparison children. Finally, program children performed significantly better than comparison children on an interview measure of social understanding administered at fifth grade, indicating that they have a deeper and more sophisticated understanding of others' needs, feelings, and perspectives.

Questionnaires administered in the third and fourth grades also showed that program children had a greater commitment to democratic values than comparison children. In the third grade, program children scored higher than comparison children on a measure of "assertion responsibility" (the belief that one has the responsibility to state one's position even if it seems unlikely to prevail). In fourth grade, program children also had higher scores than comparison children on measures of equality of representation and participation (i.e., beliefs that all members of a group have a right to influence group decisions and to participate in group activities) and willingness to compromise, indicating greater support for a general cluster of democratic values.

Indications of a greater orientation toward equality among program children were also evident in measures of behavior during structured small-group tasks outside the classroom at several grade levels. However, overall, differences between program and comparison children in behavior outside of the classroom have not been as large or consistent as those shown through the observations of classroom behavior. Differences over the years generally have favored the program children (e.g., more spontaneous collaboration and more equal participation in structured four-person tasks, more collaborative and prosocial behavior on the playground), but these effects have often been weak and occasionally inconsistent (Solomon et al. 1987).

Finally, some recent findings suggest that the CDP program may also have positive effects on students' academic performance. Although program and comparison children did not differ on standardized achievement test scores at fourth grade (students at both groups of schools regularly score very high on these tests, making further increases quite difficult to obtain and detect statistically), program children performed significantly better than comparison children on a measure of high-level reading comprehension adapted from an instrument developed by the Educational Testing Service and administered at sixth grade. Program children also scored significantly higher than comparison children on a measure of responsible work atmosphere in the classroom (i.e., perceptions that students work very hard and try to do their best work) at fifth and sixth grades.

Current Status

The CDP program completed its seventh and final year of implementation in the initial district at the end of the 1988/89 school year. Since the 1986/87 school year, training and implementation have been concentrated in one program school in an effort to create a model demonstration school to support wider dissemination of the program throughout the district. The first longitudinal cohort is currently in the seventh grade, and followup outcome assessments are planned to continue through at least the eighth grade.

In fall 1988, program training and implementation began at two elementary schools in a second school district in Northern California that serves a more ethnically and socioeconomically diverse student population.

The Seattle Social Development Project

The Seattle Social Development Project (SSDP) is a longitudinal field experiment being conducted in the Seattle Public Schools by the Center for Social Welfare Research of the University of Washington (Hawkins and Catalano 1987). The intervention was designed to prevent AOD use and delinquency in adolescence by addressing a specific set of key risk factors while children are in elementary and middle schools.

The project began in 1981 with samples of over 500 first grade students at seven elementary schools and over 1,000 seventh grade students at five middle schools. Teachers and students at these 12 schools were randomly assigned to program or control classrooms; program students received a comprehensive classroom and family program.

The elementary cohort was expanded in 1985 to over 1,000 students and 19 elementary schools, and the design was changed to a quasi-experimental one involving 14 program and 5 comparison schools. Students at 11 program schools received the entire classroom and family program; those in the remaining 3 program schools received only the family program. The students have been followed longitudinally since 1981, and outcome evaluations are currently available for students in grades two, five, and seven.

Theoretical Model

Like PPP, the general theoretical prevention model upon which SSDP is based is the social bonding theory of delinquency. More specifically, the social development model of delinquency from which the SSDP was derived (Hawkins and Weis 1985) is an integration of Hirschi's (1969) social control theory of delinquency and Bandura's (1977) social learning theory. The model views antisocial and delinquent behavior as varying inversely with the strength of a person's bond to conventional society. This bond consists of affective attachments to other members of society, commitment to and involvement in accepted activities and social institutions, and a belief in the legitimacy of the social order.

The model postulates that bonding to a social group or institution will occur to the extent that each person has (a) opportunities to be actively involved with others in the group or institution, (b) the skills necessary to perform competently in the setting, and (c) receives consistent positive reinforcement for participation. Bonds to traditional socializing agents and institutions, such as family and school, will reduce the probability of attachment to deviant groups and thus inhibit delinquent behavior, because the normative behaviors rewarded in the family and the school are not compatible with those likely to be rewarded in deviant groups. On the other hand, to the extent that traditional socialization agents fail to provide opportunities for effective involvement or to reward participation, the person is likely to seek these experiences among deviant groups and develop attachments to delinquent peers. The SSDP program thus attempts to prevent delinquency by promoting the formation of bonds to the family, school, and nondelinquent peers (Hawkins and Weis 1985).

Program Practices

The intervention program attempts to promote bonding to the family and school by helping parents and teachers recognize and reward children's positive behavior; increasing communication and positive interactions between adults and children at home and school, and among students in the classroom; and improving children's school performance and academic achievement.

The parent program includes the following elements, developmentally adjusted for children at different grade levels. These elements attempt to help parents reduce conduct problems among children in the early elementary grades, increase scholastic performance in the middle elementary grades, and respond effectively to social influences toward AOD use in the late elementary grades and in middle school:

1. *Catch 'em being good.* Parents of first and second grade children are taught basic parenting skills and trained to recognize and encourage children's positive behavior.

2. *Help your child do well in school.* This element seeks to increase communication between the family and the school and to establish a home environment in which learning is seen as both important and enjoyable by training parents to teach basic reading and math skills to their second and third grade children.

3. *Prepare for the drug (free) years.* This aspect is specifically focused on the prevention of alcohol and other drug use. Parents of fifth and sixth grade children are provided with information about social influences on children's AOD use and training in family management skills.

The classroom program also consists of three elements. These are designed to help teachers create and maintain an effective learning environment, achieve instructional mastery, and promote positive student behavior in the classroom (Hawkins and Lam 1987):

1. *Proactive classroom management.* This component is directed toward establishing a classroom environment conducive to learning and helping students take responsibility for discipling themselves and becoming independent learners. Teachers are trained to give clear and explicit instructions for student behavior and to establish classroom routines at the beginning of the school year in order to create a consistent pattern of expectations between the teacher and students. Teachers are also taught techniques for minimizing disruption of classroom activities. They are trained to respond to disruptive behaviors by taking immediate and brief action to restore the learning environment and downplay the incident. At the same time, positive behavior is reinforced through the frequent use of contingent praise and encouragement.

2. *Interactive teaching* (Bloom 1976). This is a mastery learning approach to teaching shown to improve student achievement in a variety of classroom settings. Teachers create individual learning plans for students and work with them to master clearly specified learning objectives. Grades are determined by mastering individual objectives and by improvements over prior performance, rather than through normative comparisons with the performance of other students. This strategy increases the opportunities for all students to succeed at academic tasks and thus should

enhance their beliefs about their competence and their commitment to educational goals.

3. *Cooperative learning.* SSDP uses cooperative learning methods developed at Johns Hopkins University (DeVries et al. 1980; Slavin 1983). These techniques organize students into ethnically and academically mixed teams that work together to master academic material; rewards are based on each team member's improvement over his or her own prior performance. This allows each student an equal opportunity to contribute to the team, regardless of relative ability, and establishes peer pressure toward academic success. In addition to improving student achievement, these techniques have been found to increase mutual concern among students and enhance positive attitudes toward teachers and schools.

Finally, the SSDP intervention includes a secondary prevention program. Students who are having particular problems in school because of their misbehavior or their failure to adjust to the classroom are referred by teachers, principals, or parents to home-school liaison workers. These workers assess the problem and then work with parents, teachers, and the child to develop and implement a plan for improvement.

Training and Program Delivery

The program teachers received 5 days of initial training in the three classroom components and three booster training sessions during the academic year. One teacher at each program school is also enlisted as a coach and trained to use a system of observation and routine feedback to encourage use of the program elements by teachers in the school. The coach is given a free period each day in which to observe and confer with other program teachers (Hawkins and Lam 1987).

Target Population

The program and comparison schools are located in an urban area with an ethnically and socioeconomically diverse population. Approximately half of the students are from low-income families, approximately half are from minority groups, and over one-third are from single-parent families (Hawkins and Catalano 1987; Hawkins and Lam 1987).

Quality of Implementation

Implementation has been assessed through structured classroom observations and questionnaires administered to students in program and comparison classrooms. Analyses of observation measures have indicated that, as a group, program teachers have been significantly more likely than comparison teachers to use program practices; however, with respect to quality of implementation, the differences are related more to the use of undesirable teaching practices by comparison teachers than to exemplary program implementation by program teachers.

Student questionnaire responses also indicate that implementation has not been especially strong. Although program students have consistently reported greater use of student team learning groups in their classrooms, they have not differed significantly from comparison students in reported involvement in class discussion or activities, perceived class norms favoring achievement, perceived opportunities for positive interaction with peers, or in reported use by teachers of interactive teaching methods (Hawkins and Lam 1987).

Program Effects

Analyses of school record data have indicated that program and comparison groups were comparable on a number of sociodemographic variables and standardized achievement test scores prior to program implementation. Equivalence with respect to social behavior or school-related attitudes is unknown, since these variables were not assessed before treatment.

Although many analyses of outcome data indicated no differences between program and comparison students, several significant differences between groups have been found (Hawkins and Catalano 1987; Hawkins and Lam 1987). The program appears to have influenced school- and family-related attitudes as intended. At fifth grade, program students were significantly more likely than comparison students to report positive attitudes toward school, positive attachments to family members and their teachers, and more discussion of problems at home with their parents. The program also appears to have positively affected students' academic achievement and commitment to schooling. Program implementation in seventh grade classrooms was positively related to student achievement in mathematics on standardized tests (controlling for sixth grade scores), reported time spent doing homework, and educational aspirations.

The findings also suggest that the SSDP program is having some effect on misbehavior in school. At second grade, teacher ratings indicated program boys were less aggressive and program girls less self-destructive than their comparison counterparts. Program implementation in seventh grade was associated with reductions in both officially recorded and self-reported suspensions and expulsions (controlling for previous rates of suspension and expulsion), and with less self-reported use of alcohol or other drugs at school. However, the program has not yet shown effects on self-reported AOD use outside of school, on the frequency of getting into trouble for alcohol use at school, or on self-reported delinquency.

Finally, in contrast to the above findings indicating that the primary prevention classroom program is having some of its intended effects, analyses of outcome data have indicated that the secondary prevention home-school liaison program was not successful—the high-risk students in this program did not differ significantly from their matched comparison students on any outcome measures.

Current Status

The elementary school cohort is now in eighth grade. Current plans call for continued assessments through the tenth grade.

Improving Social Awareness—Social Problem-Solving Project

The ISA–SPSP is a primary prevention program being conducted in a central New Jersey community as a joint project of Rutgers University, a community mental health center, and the public school system (Elias et al. 1982). The program was designed to prevent the emergence of social, emotional, and academic problems during the middle-school years by enhancing elementary school children's social competencies, particularly their skills for solving interpersonal problems. The project began in spring of 1980, with implementation of a pilot problem-solving curriculum in two fourth grade classrooms at one elementary school. Following the pilot, the curriculum was substantially revised, expanded, and standardized and then implemented in 16 fourth and fifth grade classrooms in four elementary schools during the 1980/81 and 1981/82 school years. A second set of modifications and extensions was incorporated, and the final curriculum was formally integrated into the educational program of all fourth and fifth grade classes in the district by the end of the 1982/83 school year.

Theoretical Model

The ISA–SPSP program, like other social skills training programs (e.g., Shure and Spivack 1978), is derived primarily from cognitive social learning theory (Bandura 1977; Mischel 1973). According to this social-cognitive perspective, children's behavioral adjustment is mediated by a set of basic cognitive processing skills that are used to understand and respond to social situations. These abilities include social understanding, self-control, communication and social interaction skills, and planning, critical thinking, and decisionmaking skills. Having these basic skills is considered to be a necessary, though not sufficient, condition for positive social adaptation. Maladjustment may result from deficiencies in particular skill areas, failure to apply the skills in problem situations, or poor behavioral implementation of cognitive strategies (Elias and Maher 1983; Elias et al. 1985; Spivack et al. 1976).

As a preventive intervention, the ISA–SPSP seeks to promote positive social adjustment during the middle-school years by enhancing children's general social competencies during elementary school, particularly their abilities to cope with interpersonal problems and to make effective decisions in a wide variety of social situations (Elias et al. 1982). The transition from elementary school to middle school is considered a stressful time for children, and the child's ability to cope with these adaptational pressures is seen as having important influences on the emergence of such problems as AOD use, delinquent behavior, and school failure, and on subsequent adjustment during adolescence and early adulthood. By improving children's abilities to solve social problems, the ISA–SPSP was expected to result in a more positive and effective adaptation to the academic and interpersonal challenges of the middle school.

Program Practices

The ISA–SPSP program combines elements of affective education and social skills-training programs (Elias and Clabby 1984*a*, 1988). Like affective education programs, it seeks to increase understanding of self and others, enhance self-esteem, self-confidence, and concern for others, and to create a classroom environment that is characterized by positive interpersonal relationships and is conducive to academic, social, and affective development. Like social skills-training programs, it teaches children a set of discrete steps for thinking about and solving personal and interpersonal problems and provides opportunities to rehearse these skills and apply them to the solution of both hypothetical and actual problems.

A pilot curriculum derived from earlier work by Elardo and Cooper (1977) was implemented during the first year of the project in fourth grade classrooms. Two 30-minute lessons per week were presented for a period of approximately 5 months. In each lesson, children were read a story problem and guided through a set of eight problem-solving thinking steps: identify the feelings of those involved, define the problem, decide on a goal, think of alternative solutions to the problem, consider the probable consequences of each solution, select the best solution, plan how to implement the solution, and try the solution and evaluate the outcome. Each child then selected a solution to the problem, and several children role-played their solutions while the others observed.

A revised and expanded two-phase curriculum was implemented during the next 2 project years. The curriculum was tightly scripted and the problem-solving steps were taught cumulatively, rather than simultaneously. The first curriculum phase focused on teaching children the steps; a second phase was added to foster application of the steps to actual problem situations. Finally, the program was extended to follow a 2-year sequence. Fifth grade lessons were more cognitively and developmentally advanced; videotapes portraying children coping with common problem situations rather than the story problems were used with fourth graders.

The *instructional phase* of the two-phase curriculum is still in place. It consists of 20 lessons of approximately 40 minutes duration presented twice per week. Lessons begin with group sharing of feelings or occurrences followed by (a) presentation of the skill to be covered, (b) exposure to a sample situation in which the skill may be applied, (c) discussion of the situation and skill, (d) role playing, and (e) summary and review. The first two lessons focus on establishing rules for discussion, familiarizing children with problem situations, and discussing the value of learning ways of handling problem situations. The next 16 lessons focus on specific problem-solving steps, with two lessons on each of the eight steps noted above. The final two lessons focus on the integration of the specific steps in the context of specific problems.

The *application phase* of the two-phase curriculum consists of two aspects. In these, the teachers are (a) instructed in how to mediate conflicts between students by using questioning strategies to facilitate children's problem-solving thinking and behavior and (b) provided with activities and lessons that help integrate problem-solving into the regular routine of the classroom. The latter include the use of class problem-solving charts (on which students record problem situations, skills, and outcomes) and class meetings in which students help one another solve particular problems. Formal application lessons are conducted approximately once a week, and conflict resolution interventions are used as often as warranted.

The final three-phase curriculum has been in use since the fall of 1982. The major modification involved the addition of a *readiness phase* consisting of 16 lessons, 8 focused on increasing self-control skills (e.g., listening, following directions, resisting provocation) and 8 on improving social skills and group cohesiveness (e.g., giving and receiving help and praise, showing concern for others' role-playing skills). In addition, four lessons were added to the instructional phase to give students more practice at integrating the eight problem-solving steps in specific situations. The current curriculum thus consists of 16 readiness, 24 instructional, and 12 formal applications each year for 2 years.

Training and Program Delivery

The ISA–SPSP lessons have generally been conducted by the regular classroom teacher. Lessons in the two- and three-phase curricula have been simplified and tightly scripted to minimize the amount of preparation time needed by teachers and to standardize presentation. Teachers were trained initially through inservice workshops, and a consultant was provided to each school to work with the teachers during the school year to ensure they understood the lessons, to model appropriate instructional practices, and to observe lesson presentation and provide feedback to teachers about performance (Elias 1985).

Target Population

The four elementary schools are located in a multiethnic, economically depressed community in central New Jersey with a relatively high incidence of marital disruption. The population is primarily white and working class. Prior to intervention, school administrators perceived an increasing incidence of social, emotional, and behavioral problems in the student population, especially in the middle school. These problems were seen as contributing to academic underachievement (Elias et al. 1982).

Quality of Implementation

Implementation has been monitored through several procedures, including examination of teachers' lesson books, videotapes of teachers conducting lessons in the classroom, feedback from program consultants, and reports of school principals and classroom observers. These data indicated that teachers generally conducted the lessons as scripted and encouraged application of the social problem-solving steps in the classroom. Teachers' ability to facilitate students' problem-solving thinking and behavior has been examined using hypothetical school-based problem situations. Analyses of these data indicated that training was associated with significant increases in teachers' use of facilitative questioning strategies and with significant reductions in their use of inhibitory approaches to helping children resolve problems. Untrained teachers were significantly more inhibitory of children's problem-solving than trained teachers (Elias 1985).

Program Effects

Outcome assessments completed to date have consistently shown that ISA–SPSP results in significant improvements in social problem-solving skills. On hypothetical-reflective measures of problem-solving (Elias 1982; Elias et al. 1978; Elias et al. 1986*b*), program children have scored significantly higher than control children on understanding of problem situations, sensitivity to others' feelings, consequential thinking, personal initiative, expected ability to resolve problems, and use of prosocial strategies (Elias 1985; Elias et al. 1982). Scores on these measures have been shown in other studies to be significantly related to teacher ratings and sociometric indices of adjustment (Elias 1985) and to reliably identify children with clinically significant adjustment problems (Elias et al. 1987). Program children also reported using the problem-solving thinking steps when faced with actual problems in the classroom and at home, believed the program helped them cope with problems, and said they try to help others with problems (Elias et al. 1982).

Some direct evidence of program effects on children's behavioral adaptation and adjustment also has been found. Program teachers rated their students as improving in self-reliance, adaptiveness, and behavioral appropriateness during the school year, whereas control teachers saw some deterioration in these areas among their students. Also, students who showed significant gains in social problem-solving skills after the program's instructional phase showed similar gains in sociometric indices of socially appropriate and constructive problem-solving behaviors (Elias 1985).

Of greater importance are findings showing the program had favorable effects on children's adaptation to the middle-school environment (Elias et al. 1986*a*). Compared to control children, those who received either the partial (instruction phase only) or the full program (instruction and application phases) reported having significantly less difficulty in coping with a variety of common problem situations during the transition to middle school (e.g., peer pressure, academic demands, conflicts with authority figures, AOD use), and those who received the full program reported significantly fewer and less severe problems than those who received the partial program.

Children's ability to cope with these problem situations appeared to be mediated in part by their social problem-solving skills, since children deficient in these skills reported the most difficulty in coping. However, possession of adequate problem-solving skills alone was not highly predictive of adjustment. When skill differences among children in the partial and full program groups were controlled for statistically, those who received the full program were still found to have significantly less difficulty in coping with problem situations. Apparently, the full program had effects other than skill enhancement that improved children's ability to cope during the transition to middle school (Elias 1985; Elias et al. 1986*a*).

A followup study of three cohorts of children in high school (grades 9, 10, and 11), 3 to 5 years after they completed the ISA–SPSP program, revealed a number of positive program effects on AOD use and delinquency (Elias 1989). Compared to control children, ninth grade program children reported significantly less use of alcohol, and program children at all three grade levels reported fewer instances of buying or providing alcohol for others. (No findings were reported regarding use of other drugs.) Program children also reported significantly less vandalism, aggression, and petty theft than control children and scored significantly higher on measures of social competence and popularity.

Current Status

The ISA–SPSP intervention is in its 11th year; additional multiyear followup studies are in progress to assess program effects on AOD use and delinquency, as well as school performance and mental health as the children progress through middle and high school. The ISA–SPSP has been widely disseminated within New Jersey and several other Eastern and Midwestern States and has been modified and extended for use in secondary schools. A more important development from the standpoint of AOD prevention research, however, is the formation of a consortium of researchers in the area of social competence in children (with funding from the William T. Grant Foundation). The consortium will develop a detailed and coordinated agenda for future research on the school-based promotion of social competence (Elias et al. 1988; Weissberg and Elias 1988).

Summary of Reviewed Programs

Although the selection criteria were designed to ensure that the four programs reviewed here would be similar in many respects, it should be noted that they also differ in important ways, including age at first intervention (preschool, early elementary, middle-to-late elementary), duration of intervention (preschool, K–6, 1–8, 4–5), theoretical emphases, and specific program practices. Target populations are also quite diverse; they include lower SES African American children, ethnically and socioeconomically diverse student populations, middle to upper middle SES and primarily white student populations, and urban and suburban populations in Eastern, Midwestern, and Western States.

While all are concerned with positive social development, two programs were explicitly designed as prevention programs (PPP to prevent academic failure, SSDP to prevent delinquency/AOD use), one to enhance the development of particular life skills (ISA–SPSP), and one to promote the development of more general positive social attitudes, values, and behaviors (CDP). Consequently, the programs also differ in their theoretical derivations, ranging from theories of child development to delinquency theory to the more limited body of literature on social competence.

Similarly, all four programs were designed to become integral aspects of the school. However, their approaches varied from essentially designing a school to encompass the program (PPP); to instituting widespread changes throughout the school, including changes in schoolwide policies and practices as well as classroom organization, practices, and activities (CDP); to more limited but still relatively encompassing changes in classroom practices (SSDP); to the incorporation of a relatively discrete set of activities into the school's curriculum (ISA–SPSP).

Common Elements

Given these differences in theoretical orientation, explicit aims, specific practices, and target populations, it is noteworthy that the programs also have in common several important features:

1. All four programs are explicitly developmental, all emphasize tailoring program practices to students' current level of maturity/stage of development, and most explicitly involve a graduated sequence of activities aimed at acquisition and refinement of successively more complex skills.
2. All stress the importance of *active* involvement of students in their own development and incorporate procedures to provide students with opportunities to exercise autonomy, make their own decisions, and apply the knowledge and skills they have learned to their social interactions. Consistent with this emphasis, the programs view the role of the teacher largely as facilitating students' development through the provision of structure, guidance, and support.
3. All consider the acquisition and refinement of academic and social skills and competencies to be important elements of the intervention (although the breadth of skills included and the relative emphasis on particular skills differ from program to program).
4. All recognize the importance of positive interpersonal relationships for health development (again with some differences in relative emphasis), and all explicitly incorporate procedures designed to promote positive peer and adult-child (teacher-student, parent-child) relationships.

Adequacy of Implementation

All four programs included procedures for monitoring and assessing implementation. However, not all were successful in attaining widespread, high-quality implementation. ISA–SPSP, the most discrete and limited of the four interventions, appears to have achieved generally good implementation through the use of highly scripted lessons. The other three programs, which involved more extensive and complex interventions, varied in the quality of implementation they achieved. Given the small number of teachers, the collaborative relationship between project staff and teachers, the development of an entire curriculum rather than modification of existing practices, and ongoing intensive training and supervision, PPP probably achieved the most consistently high-quality implementation (though no formal data on implementation have been reported). Using a similarly intensive training program with a much larger number of regular classroom teachers in existing schools, CDP achieved relatively widespread implementation of each program component among intervention classrooms, but not all trained teachers became good implementers. SSDP appears to have been the least effective at achieving widespread, quality implementation. With the possible exception of cooperative learning teams (the most scripted of the three SSDP program components), few teachers appeared to have implemented the program very well.

These differences in implementation seem related to both the nature of the individual programs and the extensiveness of training. ISA–SPSP, with a relatively circumscribed curriculum and tightly scripted lessons that required little preparation and planning by teachers, was able to achieve good implementation through a relatively limited training approach involving inservice workshops and limited coaching. Even here, however, teachers required a year of training and practice before they fully mastered the program (Elias 1985).

Attaining quality implementation of the other three types of programs probably requires much more extensive training. Both PPP and CDP utilized a comprehensive training program involving workshops before and during the school year, written descriptions of practices and sample program activities, modeling of practices by the training staff, and extensive classroom observation and feedback during the school year. In contrast, SSDP used a more limited training program and achieved poorer quality and less widespread implementation than either CDP or PPP.

Methodological Differences

The programs also differ in the quality of their evaluation designs. The PPP evaluation is a true experimental design with random assignment to conditions and established pretreatment equivalence of program and control groups; it has had low attrition rates, but also a relatively small number of subjects per group or condition. The other three intervention projects involve relatively large numbers of subjects, but have less rigorous research designs. SSDP began with an experimental design involving random assignment of teachers and students to program and control classrooms, but later changed to a quasi-experimental design, with random assignment of matched groups of schools to program and comparison conditions. The CDP evaluation also is based on a matched groups, quasi-experimental design. The evaluation studies for ISA–SPSP generally have involved the use of a staggered schedule of teacher training, so that some classrooms could serve as delayed controls for those currently implementing the program.

It is also important to note that, while the research designs focused on evaluating the effects of classroom interventions, three of the four programs also included some type of parent program. PPP included an intensive parent program in which teachers visited each mother and child in the home for 1½ hours per week from October to May. SSDP involved a less intensive, but sill relatively ambitious attempt to train parents in practices that support the classroom program. CDP utilized various procedures to inform parents of program practices and build support for the program in the home. In each case, little is known about the effectiveness of these parent-focused interventions; thus, the effects on children could be due, at least in part, to intermediate effects on parents.

Differences in Adequacy of Evaluation

Other important program differences reflect the fact that the four programs are in different stages of development and evaluation. PPP is the most complete in both respects: the last cohort completed the PPP program more than 20 years ago, and outcome assessments have been completed through at least age 19 (15 years posttreatment). The remaining programs have been implemented within the last 10 years and are in various stages of development and evaluation. SSDP began in 1981 with cohorts of first and seventh graders, was significantly expanded in 1985, and has completed outcome assessments for second, fifth, and seventh grade students. ISA–SPSP began with a pilot project in 1980, revised the curriculum and implemented an expanded program during 1980-82, then revised the curriculum again and implemented the present form of the program. Outcome assessments have been completed for several cohorts while they were receiving the program in fourth and fifth grade, during the transition to middle school (sixth grade), and in high school (grades 9, 10, and 11). CDP began in 1983 and has completed yearly outcome assessments for a large longitudinal cohort from kindergarten through sixth grade (1988) as well as a second longitudinal cohort at kindergarten (1985) and first grade (1986).

Given the programs' different aims and their different stages of development and evaluation, the range and nature of outcome measures that are used to evaluate the interventions also vary considerably. Only three of the four programs (PPP, ISA–SPSP, and SSDP) have completed assessments of delinquency and AOD use, and subjects were still relatively young when last assessed at one program (SSDP). Students in CDP are still too young for delinquent behavior and AOD use to be assessed. However, CDP has completed assessments of variables related to risk for later problem behavior (e.g., liking for school, positive peer relationships, social skills) and reported positive program effects on these antecedent outcome measures.

Findings Relevant to Primary Prevention

The most thorough and complete set of findings is available for PPP. Evaluations have demonstrated clear prevention effects into early adulthood, and outcome data are consistent with PPP's theoretical model. Compared to control youngsters, PPP participants showed early gains in intellectual ability (which did not persist), followed by consistently better academic performance through high school, greater liking for school, greater commitment to schooling, higher educational aspirations, and higher educational attainment. At the same time, they engaged in less misconduct and antisocial behavior through middle school, and less delinquent and criminal activity (but *not* less drug use)[4] through age 19. By early adulthood they evidenced greater economic independence, higher levels of employment and higher earnings, and greater job satisfaction. In short, the program subjects showed consistently better adaptation to the social environment from early childhood through early adulthood.

Relevant findings from evaluations of other programs are considerably more piecemeal and tentative. SSDP generally has reported favorable findings, but subjects are not yet old enough to draw conclusions about the prevention of serious social problems. Program participation is associated with less aggressive behavior and conduct problems in the early elementary grades, with enhanced parent-child and teacher-student relationships, and with liking for school in the late elementary grades. By adolescence, SSDP shows some desirable effects on achievement, educational expectations and aspirations, and serious school conduct problems (i.e., those resulting in suspension or expulsion). These outcomes are consistent with the theoretical model on which SSDP is based. SSDP evaluations also suggest that the program has reduced AOD use at school, but has not, as yet, had significant effects on overall levels of self-reported delinquency or AOD use.

Research on CDP has consistently demonstrated positive effects on interpersonal behavior and peer relationships in the classroom and on students' social problem-solving skills, as well as effects on other variables that have not been linked to risk of delinquency or drug use, such as endorsement of democratic values. The findings suggest that the CDP model has some promise for prevention. However, because participants are still quite young, no assessments of delinquency and AOD use have been conducted. Also, since the study population is composed of high-achieving, middle- to upper middle-class students, few differences between program and comparison students in academic performance or attitudes toward school have been found, and no analyses have been done of other factors related to commitment to schooling (e.g., attendance, educational expectations, or aspirations).

Evaluations of ISA–SPSP have demonstrated program effectiveness in improving students' social problem-solving skills, and program students show evidence of greater social competence and self-reliance in their interactions with peers. Also, on transition to middle school, program children reportedly experienced less difficulty than control children in coping with stressors, such as peer pressure, academic demands, dealing with authority figures, and becoming involved with cigarettes, alcohol, and other drugs. Finally, followup studies in high school indicate that the ISA–SPSP program has positive effects on delinquency and use of alcohol (but not use of other drugs).

Toward a General Model of Primary Prevention

The Role of Theory in Prevention Programming

Programmatic interventions to prevent social problems should be derived explicitly from theoretical models of social development. Social problems develop over time; they emerge at a certain point in development because of earlier events and experiences and current life circumstances. The challenge is to identify the developmental pattern(s) that leads to social problems or, conversely, that leads to social adjustment and psychological health.

Although considerable progress has been made toward identifying characteristics of individuals and environments that increase the risk of delinquency, alcohol use, other drug use, and other problems, our knowledge of the developmental etiology of social problems is still quite limited (cf. Moskowitz 1987*a*; Zucker 1986). It is recognized that social problems are multiply determined, and several specific factors seem to be consistently associated with rates of problem behaviors. Still, little is known about the processes through which these factors interact over time.

Until a greater understanding of the etiology of social problems is acquired, it will be difficult to confidently identify critical developmental stages and experiences and, hence, to improve the effectiveness of prevention activities. Nevertheless, steps can be taken in this direction based on current theories of child development and socialization, empirical research on social development in general and on the etiology of social problems in particular, and the limited information currently available on the effectiveness of the innovative school-based programs discussed here. Using these as a basis, a tentative and general theoretical model can be proposed. It may prove useful as a framework for developing or identifying the kinds of research and demonstration projects needed to increase our knowledge about the etiology of social problems and to improve the effectiveness of primary prevention programs and policies.

A Tentative Model of Socialization

Social problem behaviors emerge in the course of development because of problems in socialization. As children mature, they are expected to conform to social norms, adopt important cultural values, and acquire the basic knowledge and skills necessary for assuming responsible adult roles in society. Social problems are, by definition, behaviors that violate social norms and values; they indicate that the socialization process has not been effective.

Developmentally, the socialization process may be conceived of as a series of adaptations by individuals to the demands and expectations of the society in which they exist. The required adaptations are age graded, based on cultural beliefs about the capabilities of the child at particular points in development, become progressively more complex over time, and are cumulative, meaning that the adaptations required at one stage generally require the knowledge and skills developed through successful adaptation at earlier stages.

Primary responsibility for socialization is formally and traditionally vested in the social institutions of the family and the school, though the peer group also plays a major role. Typically, each of these three primary socialization systems is seen as having its greatest influence on the individual at different points in development: roughly speaking, the family from birth through adolescence, the school from early childhood through late adolescence, and the peer group beginning in early adolescence. Thus, socialization may be viewed as individuals' adaptations to the expectations and demands progressively imposed upon them by the family, the school, and the peer group during the course of development.

The ability of socializing agents to influence the individual is ultimately based on the individual's dependence upon others for satisfying fundamental human needs. Satisfaction of these needs establishes a positive affective bond between the individual and the socializing agent and motivates the individual to maintain this positive relationship and seek the agent's approval, comply with the agent's wishes, and imitate the agent's behavior. Conversely, frustration of the individual's needs results in the desire to withdraw from the relationship, resistance influence attempts, and reactance. Theoretically, there seem to be three fundamental psychological needs, the satisfaction of which plays a critical role in socialization processes (cf. Deci and Ryan 1985):

1. *Interpersonal relatedness* (or belongingness)—the need for warm and supportive relationships with significant others. This need is manifested in tendencies to approach and interact with others perceived as similar to the self (or ideal self), seek their approval, share experiences, and establish and maintain positive affective bonds. Need satisfaction is

reflected in feelings of social acceptance and approval, of having affectionate, loving relationships with others, and of being a valued member of a group. Frustration is reflected in feelings of social rejection and disapproval and alienation from others.

2. *Competence* (or effectance)—the need to be effective in dealing with the environment, to be capable of producing desired outcomes and avoiding undesired outcomes. This need is manifested in tendencies to explore and manipulate the environment, learn about and adapt to novel experiences, and extend one's capabilities by seeking out progressively more challenging experiences and trying to master them. Satisfaction results in feelings of competence, self-satisfaction, and pride; frustration leads to feelings of incompetence and low self-worth.

3. *Autonomy* (or self-determination)—the need to be the origin of one's actions and the cause of one's experiences, to be free of undue constraint, and to exercise choice. The need for autonomy is manifested in tendencies to exert control over one's actions, avoid becoming dependent on outcomes over which one does not have control, display oppositional actions and reactance when one's freedom is threatened, and attempt to restore freedom of action when it is lost. Satisfaction is reflected in feelings of freedom, control, and security. Frustration of autonomy results in feelings of helplessness, anger, restiveness, and insecurity.

To the degree that socializing agents and institutions satisfy these basic psychological needs, the individual will develop a positive affective bond with them, be motivated to maintain their approval and comply with their wishes, identify with them, and adopt their norms and values. In contrast, when socializing agents fail to satisfy these basic needs, the individual will experience negative affect toward them, display oppositional tendencies in response to their control attempts, and attempt to withdraw from the relationship. Moreover, the individual will *not* identify with them or adopt their norms and values, but rather will seek out relationships with others who have different norms and values and hence may be more likely to satisfy the individual's needs.

Developmentally, the first attempts at socialization occur within the family. If socialization is effective, the child will become attached to family members, adopt the basic norms and values of the family, and develop the fundamental personal and interpersonal skills necessary for family functioning. The child will feel loved, supported, competent, and secure and will be better prepared to meet the more difficult and complex adaptations required in the transition to school and the influence of teachers and peers as socializing agents.

Successful adaptation to socialization demands during the school years, in turn, will leave the child with the personal and social competencies, feelings of confidence and esteem, and fundamental beliefs and values that increase the probability of successful adaptation during the transition to adulthood. Conversely, maladaptation within the family will leave the child poorly prepared for the adaptations required during the school years, increasing the chances of academic failure and social rejection which, in turn, decrease the probability of adaptation during the transition to adulthood.

The Etiology of Problem Behaviors

Family Functioning

A large number of studies have reported associations between social problem behaviors and problems in family functioning (see Hawkins et al. 1986; Zucker and Barron 1973; Zucker and Devoe 1975). In particular, family conflict and marital discord, low communication and little involvement or affection between parents and children, and poor discipline practices (e.g., high punitiveness) have been linked to higher rates of both delinquency and AOD use. Conversely, positive interpersonal relationships within the family have been found to reduce the risk of social problems.

The characteristics of effective parenting identified in the socialization literature (e.g., Baumrind 1967, 1971; Elder 1980; Lewis 1981; Maccoby and Martin 1982) are consistent with the proposed model. Family functioning characterized by parental affection, sensitivity and responsiveness to the child's needs, open communication and shared decisionmaking between parent and child, frequent use of explanation and reasoning on the part of the parent when exercising control, and a lessening of direct control and granting of more autonomy as the child matures are all associated with childhood characteristics of self-reliance, self-confidence, social and academic competence, prosocial and cooperative behaviors, and acceptance of parental values. Similarly, many aspects of family interaction associated with social problems also have been identified as leading to poor socialization outcomes. High levels of parental rejection and punitiveness are factors that characterize children who are low in competence and self-esteem, are aggressive, and are nonconforming and rejecting of parental values.

Early Conduct Problems

Researchers have consistently found associations between early antisocial and aggressive behavior and increased risk for later social problems. The greater the variety, frequency, and seriousness of antisocial behavior during the early elementary grades, the greater the probability of frequent delinquency and AOD use in adolescence and the earlier the age at which AOD use first occurs (Hawkins et al. 1986; Robins 1978). Problems in relationships with peers and authority figures, including aggression, are associated with poor parental socialization practices, whereas the effective parental socialization practices described above are associated with prosocial behaviors, social competence, and acceptance of legitimate authority (Maccoby and Martin 1983; Radke-Yarrow et al. 1983).

Once initiated, early conduct problems may be quite persistent, since they tend to be self-reinforcing. Antisocial and aggressive behaviors tend to lead to rejection and retaliatory aggression on the part of adult authority figures, which may often escalate the conflict and exacerbate the problem. Thus, while perhaps initiated within the family, such problem behaviors tend to be augmented by the responses of later socialization agents (e.g., teachers and peers).

School Performance

Poor academic performance in late elementary school has been associated with both subsequent delinquency and AOD use (Hawkins et al. 1986); Spivack and Rapsher 1979; Zucker and Gomberg 1986). Conversely, success in late elementary school reduces the risk of social problems. From middle school through high school, low attachment to school (e.g., disliking school, low commitment to schooling, low educational aspirations, lack of respect for teachers' opinions, absenteeism) as well as poor academic performance are implicated in problem behaviors (Hirschi 1969; Jessor and Jessor 1977).

On the other hand, academic performance in *early* elementary school appears unrelated to social problems (Spivack 1983). Rather, it seems probable that children with early problems in social adjustment tend to experience later problems in academic performance, leading to a diminishment in attachment to school and increased delinquency and AOD use (Feldhusen et al. 1973; Spivack 1983). Finally, it should be noted that effective parenting practices have been associated with academic competence as well as social competence in adolescence (Maccoby and Martin 1983).

Peer Relations

Relationships with peers are among the strongest and most consistent predictors of delinquency and AOD use. Early social maladjustment predicts later antisocial behavior, including delinquency and AOD use. Also, associating with delinquent and drug-using peers in adolescence is one of the strongest correlates of adolescent delinquency and drug use (see Hawkins et al. 1986; Hawkins and Wall 1980).

The available evidence (e.g., Kandel 1985) suggests that, during adolescence, friends are chosen in a manner that maximizes congruence in attitudes, values, and behaviors. Individuals are both influenced by their friends' norms and behaviors and choose friends who reinforce their own norms and behaviors. This implies that adolescents who have been adequately socialized (i.e., who have had their needs met through relationships with parents, teachers, and peers during childhood and thus have a positive attachment to society) will choose friends who similarly share their acceptance of traditional social norms and values. Conversely, adolescents who have experienced problems in socialization and, hence, have been unable to meet their needs through conventional relationships, will be alienated from society and will choose friends who have similarly rejected and rebelled against the larger society.

Summary

Overall, the proposed model seems consistent with the available evidence on the etiology of social problems. Generally, a pattern of increasing alienation from society, beginning in early childhood in the family and continuing into adolescence, is associated with later social problem behaviors, including involvement in delinquency and AOD use:

- Poor socialization practices in the family lead to low attachment to parents, resistance to authority, and early behavioral (e.g., aggression, withdrawal) and emotional problems (e.g., anxiety, depression), as well as developmental deficits (e.g., poor attention span, poor impulse control, and other signs of immaturity).

- Problems resulting from poor socialization in the family lead to difficulties in the initial adaptation to school, particularly in early conduct problems. These social relationship problems tend to persist and to be exacerbated by the responses of teachers and peers, leading to social isolation/rejection, anxiety, insecurity, and continued problems with authority.

- By mid-to-late elementary school, persistent problems in social adaptation have led to decreases in learning. Problems in academic performance emerge, resulting in increased anxiety, insecurity, and depression, increased social isolation/rejection from more competent peers, and the beginnings of alienation from school.

- Academic and social problems persist and are exacerbated by the stressful transition to secondary school. Inability to function effectively in school leads to disillusionment with schooling, efforts at withdrawal (e.g., dislike for school, absenteeism, low academic effort) and rebelliousness (e.g., nonconformity, delinquent acts), all of which contribute to further academic failure and increased alienation from academically and socially competent peers. Lack of success at conventional pursuits leads to a search for alternative relationships, resulting in association with similarly alienated peers.

- Continued failure and association with delinquent peers leads to increased delinquency, AOD use, resistance to authority, alienation from conventional society, and rejection of social norms and values, as well as continuing academic problems and a greater probability of dropping out of school.
- Finally, the failure to develop basic social and academic competencies, as well as rejection of conventional norms and values, decreases the probability of a successful transition to adulthood, including economic independence. Continuing failure at conventional pursuits leads to continued or escalated delinquency and AOD use and increased probability of mental health problems.

How the Programs Compare to the Model

PPP. Although focused primarily on success at school, there is considerable correspondence between the theoretical model upon which PPP was based and the model proposed here. In particular, academic performance and commitment to school play major roles in both models.

SSDP. The theoretical model underlying SSDP is highly consistent with the model proposed here. Both are developmental models, both are concerned with socialization or attachment to conventional society, both focus on social problems as a class of outcomes, and SSDP was explicitly developed to prevent delinquency and AOD use.

CDP. Although focused on promoting positive social development rather than preventing social problems, the CDP model is entirely consistent with the model proposed here.

ISA–SPSP. The specific developmental theory underlying ISA-SPSP and other approaches to improving social competence is basically focused on the development of a set of specific cognitive skills and the implications of these abilities for peer relations. These theories are not explicitly concerned with socialization processes and generally pay little attention to affective factors of academic competence. However, the social problem-solving programs were initially developed as interventions for children who were experiencing social adjustment problems (e.g., withdrawal, rejection by peers), which play a major role in the model proposed here. Moreover, as this program has been modified and extended for use with normal populations to enhance social competence in general, affective factors, such as positive emotional relationships, have been incorporated into ISA–SPSP. Thus, while more limited than the model proposed here, the theory underlying ISA–SPSP is quite consistent with it.

Implications of the Proposed Model

The proposed model has several important implications for educational practice with respect to promoting the healthy psychological and social development of students. In general, the model implies that schooling should be concerned with the development of the whole child, not merely basic academic competencies, and that cognitive, affective, and social development are all integral aspects of sound educational practice. Schools need to effectively address children's needs for competence, autonomy, and belongingness, so that schooling becomes a positive experience for all students. Achieving this broad set of educational goals is a difficult undertaking; it will require deep and widespread changes in the current organization, climate, and practices of most American schools.

Specifically, the model has implications for changes in four areas of educational practice: classroom management, instructional techniques, curriculum, and general school climate.

Classroom Management

Practices involving discipline and social regulation play a major role in the model proposed here. In general, the model suggests that classroom management practices that promote positive relationships with teachers and peers and promote acceptance of and personal commitment to the basic norms and values of society should prove beneficial from the standpoint of primary prevention. Particularly important are practices that (a) establish and maintain warm and supportive relationships between teachers and students and among students, (b) involve extensive use of explanation, reasoning, and induction and avoidance of excessive force and punitiveness to maintain norms of conduct, and (c) allow students to exercise autonomy and participate in the development and maintenance of classroom norms and rules.

Instructional Practices

Instructional practices should enhance interest in and enjoyment of school, maximize the chances of meaningful academic success (i.e., success should neither be too easy nor too difficult to attain), and provide opportunities for developing and using the knowledge and skills necessary for effective functioning in a democratic society (e.g., collaborative interaction, participatory decisionmaking).

Curriculum

The curriculum should explicitly reflect a concern with social development as well as cognitive development. The curriculum should include instruction in important social skills (e.g., interpersonal understanding, social problem-solving, communication, social interaction) as well as values education (i.e., opportunities to learn about, understand, discuss the importance of, and apply in practice basic social values).

Social Organization and Climate

The social organization of the classroom and school should reflect the social organization of the larger society. Students (and faculty) should see the school as a community organized according to fundamental democratic norms and values for the mutual benefit of its members, in which they have certain rights as well as responsibilities, and within which they have opportunities to participate actively and make meaningful contributions.

Conclusions and Recommendations

Research cited in this chapter points to the need for the development and evaluation of school-based approaches to primary AOD use prevention. Four innovative school-based approaches to promoting positive development are reviewed and analyzed and show considerable promise as effective alternatives to current prevention programs. A broad theoretical model of social-psychological development is outlined. The tentative model is generally consistent with the practices used in the four innovative programs and with the extant research on the etiology of social problems. The model thus may serve as an initial framework for guiding research and demonstration projects in school-based prevention.

The primary recommendation of this chapter is that AOD prevention research and demonstration programs be incorporated within the broader framework of promoting health development in children. Efforts need to begin early, during preschool and elementary school. In a sense, this advocates for a renewed exploration of a generic model of prevention programming; however, the model must be much deeper and more ambitious than those of the past. Previous attempts to prevent social problems through the promotion of positive development suffered from many of the problems identified earlier in the general critique of school-based prevention: inadequate theoretical models, poor operationalization of theoretical constructs, and poor implementation (Schaps et al. 1986). However, the discrediting of an entire class of preventive interventions because of apparent ineffective operationalization and implementation seems premature. As shown here, comprehensive school-based approaches to promoting healthy development, when thoughtfully designed and carefully implemented, can have significant benefits when targeted to a wide variety of problem behaviors.

In addition to this general recommendation, several specific recommendations for prevention research and demonstration programs seem warranted:

- More research is needed on the role of school organization and school climate in decreasing the risk of social problems. Although relationships between the general school environment and the incidence and prevalence of problem behaviors have received some attention in recent years, aspects of the school environment have received much less systematic research attention in school-based prevention than have characteristics of individual children, the family, or the peer group.

- Related to the above, more attention should be given to prevention programs that attempt to create a system of positive social influences on development by directly affecting the normative climate and socialization processes of the school (rather than programs that focus on instilling a resistance to negative social influences in individuals in an attempt to compensate for a prevailing climate conducive to AOD use and other problem behaviors).

- Primary prevention programs should be concentrated in preschools and elementary schools, rather than secondary schools. Early interventions that seek to promote successful adjustment and adaptation to the academic and social environment of the school prior to the emergence of significant academic and social problems hold the greatest promise of being effective strategies for primary prevention.

- Finally, more research is needed on the etiology of social problems, particularly research focused on the processes through which individual and environmental characteristics interact in the development of problem behaviors. Such research is sorely needed to identify critical stages and experiences in the development of psychological and social problems and, hence, optimal times and types of intervention.

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Notes

1. It should be noted that it is difficult to draw definite conclusions about program effectiveness (or lack of effectiveness) because of various methodological problems (e.g., small samples, large attrition rates, inadequate control groups, poor measurement, inappropriate statistical analysis procedures). Such methodological issues are not considered in depth here.

2. Recently, several programs aimed at reducing AOD use through instituting and enforcing school alcohol and other drug policies have been implemented. Although there is as yet little systematic research on the effectiveness of such programs, preliminary studies (e.g., Moskowitz 1987*b*; U.S. Department of Education 1986) suggest that clearly stated and adequately enforced discipline policies related to AOD use may be effective deterrents.

3. In a related study, children who had experienced either the High/Scope program or a traditional nursery school curriculum seemed to have lower levels of delinquency and better family relations at age 15 than children who had received a Directed Instruction preschool program (Schweinhart et al. 1986*a*, 1986*b*). The validity of this conclusion has been challenged, however (Bereiter 1986; Gersten 1986).

4. Given the wide range of program effects, it is somewhat surprising that there were no effects on self-reported drug use. This finding may relate to the fact that measurement of drug use was relatively crude (i.e., one question about use of marijuana and one question about use of any other "dangerous drugs"; use of alcohol was not assessed). It is also worth recalling that 90 percent of both program and control subjects reported some use of drugs and some involvement in delinquent activities at age 19 (Berrueta-Clement et al. 1984). The effects of the preschool program were restricted to reduced involvement in serious delinquent and criminal activities (crimes of violence and serious property crimes) and reduced contact with the criminal justice system (arrests, length of probation, amount of fines).

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Prepared and published by the
Office for Substance Abuse Prevention
and distributed by the
National Clearinghouse for Alcohol and Drug Information
P.O. Box 2345
Rockville, MD 20852